# SOME GEOGRAPHIC AND ECONOMIC ASPECTS OF BUILDING A SUPERHIGHWAY FROM CHICAGO TO EAST SAINT LOUIS

BY

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THESIS

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## PREFACE

United States Highway 66 is the most important rural highway in Illinois, indeed it is one of the most important in America.* It connects the two large metropolitan districts of St. Louis and Chicago, about 300 miles apart and situated on the western end of the great industrial section of the United States. It is important both strategically and commercially, yet during World War II it deteriorated to such an extent that parts of it became impassable and it was necessary to allocate scarce material, labor, and money to completely rebuild portions of it. Subsequently, other large sections have been entirely redone. In the not too distant future this road may become a superhighway. This study is a brief of the geographic aspects of building such a highway.

* U. S. Highway 66 runs between Chicago and Los Angeles via St. Louis, Oklahoma City, and Flagstaff, Arizona.

# CHAPTER I

## THE PRIMARY HIGHWAY PROBLEM

### A. A SUPERHIGHWAY NETWORK

Since the turn of the twentieth century every state in the Union has poured hundreds of millions of dollars into new and improved highways only to have those roads within a very few years become worn out, obsolete, unsafe, and uncomfortable as designs for carrying traffic that is continually increasing in volume and weight.

With few exceptions, the roads' qualities have not kept pace with the improvement of the vehicles using them. Most of our trunk highways were not built to carry loads of more than 50,000 pounds, nor were they designed for speeds in excess of fifty miles per hour. Most rural highways were not built to accommodate more than 3,500 vehicles per day. Yet one finds congestion of high powered vehicles on primary highways too often, not only in Illinois but in all states.

Most traffic engineers of the Federal Roads Administration and various state highway departments have come to the conclusion that only one highway design can possibly carry over 3,500 vehicles per day with a minimum of congestion on the road and a reasonable amount of comfort and safety for the drivers. That design is a four lane highway, and it has been termed a "superhighway."

All superhighways must have at least four lanes, but rural superhighways often embody in addition one or more of the following features.

1. Limited access, with traffic access and egress only at interchanges.
2. Dual lanes with a landscaped mall, park strip, or abutment separating the opposing lanes of traffic.
3. Gradual and banked curves with minimum vision of 1,000 feet.
4. Low grade hills. Maximum grade 3%.

5. 300 feet right-of-way with wide shoulders.

6. Grade separations over all intersecting highways and railroads.

7. By-passes for all cities, towns and villages.

8. No slow or limited speed zones.

9. No farm houses or commercial places along the right-of-way.

10. No billboards or other distracting objects along the right-of-way.

11. No pedestrians on the right-of-way.

On most of the existing highways in the United States, a motorist has to drive over narrow, broken, bumpy and cracked pavements that may get slippery when it rains. He comes across dangerous crossroads, S curves, steep grade, blind intersections, narrow bridges, soft shoulders and speed zones on narrow, crowded and congested streets. It's rare when a motorist finds a four lane highway with some or all of the improvements listed above for the cost of

these highways is great. Such roads are few and far between and the need for more of them is increasing every year.

The most pressing need for superhighways is in the northeast quarter of the United States. This area is bounded roughly by the Atlantic Ocean, the Great Lakes, and the Mississippi and Ohio Rivers. Here, where most of the people of the United States live and where most of our manufacturing is located, is found the greatest volume of commercial and passenger traffic. More important, this is the region of acute highway congestion and frequent accidents.

The need for superhighways connecting the terminal cities of the northeast has been recognized, and gradually a network of these highways is evolving. It has been estimated by T. J. Evans, Chairman of the Pennsylvania Turnpike Commission, that a minimum of 2,500 miles of superhighways is needed to interconnect these terminal cities with each other and many lesser cities.

Figure 1 shows existing toll and free superhighways in the northeast

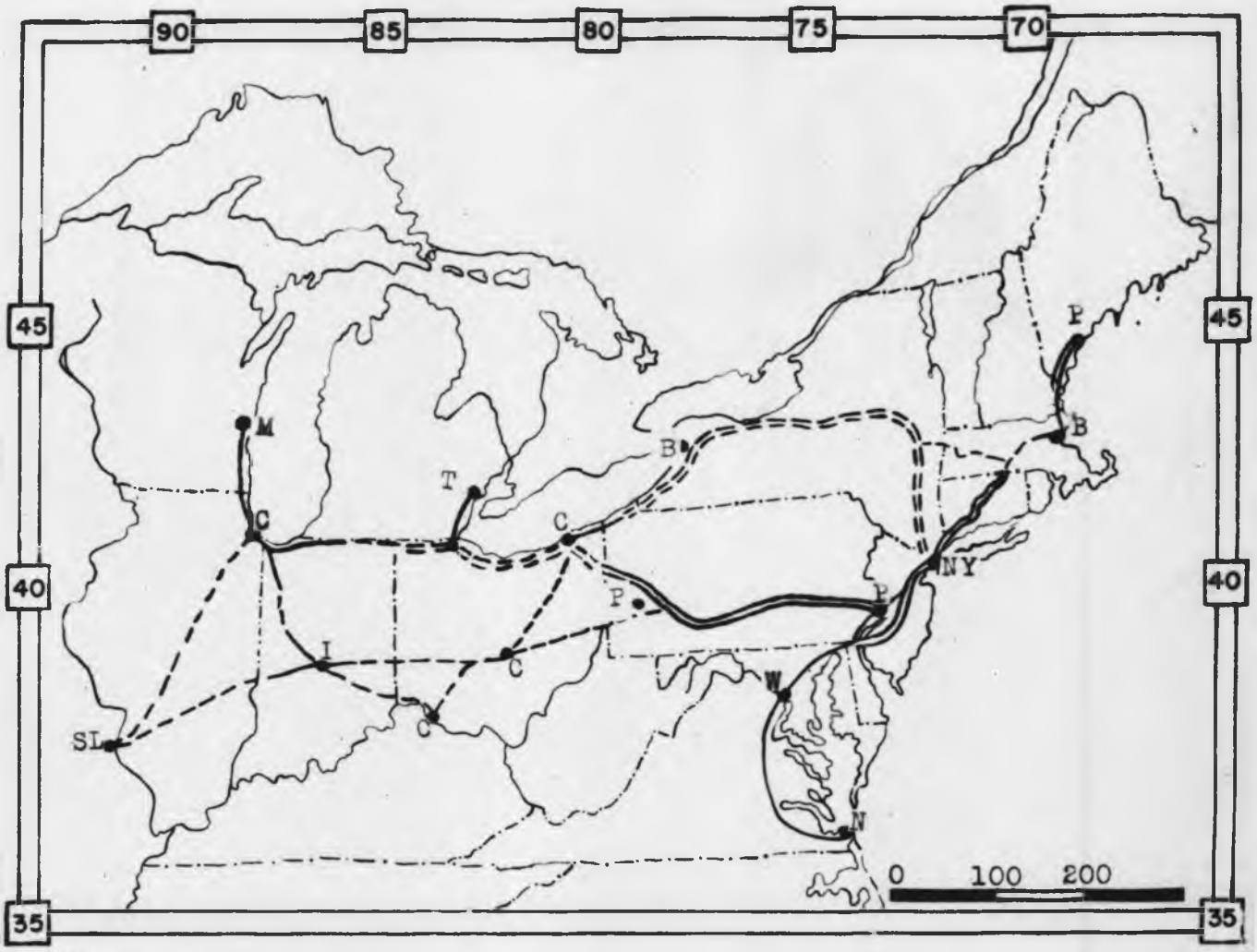


Figure 1. A Superhighway Network for the Northeastern United States as proposed by T. J. Evans, Chairman, Pennsylvania Turnpike Commission.

═══ Toll Roads completed by 1952

======= Proposed Toll Roads

——— Present Free Superhighways

- - - - - - Extent of Proposed System

region of the country. Included are highways which will be completed in 1951. This map shows that a start has been made toward an interconnecting system of superhighways. These existing links include many toll roads and much of the completed network will be a toll system. Such roads include the famous Pennsylvania Turnpike, the Maine and New Hampshire turnpikes, the Merritt and Wilbur Cross parkways of Connecticut, and New York's Hutchison River Parkway.

Although not located in the above area, the highways of California merit special attention, for there are more miles of four lane highways in that state than in any other. Due to the patterns of settlement and the physiographic features of the state which restrict the possible number of routes between terminals, there are comparitively few main roads, but all primary routes are important highways and carry a heavy volume of traffic. It became obvious over 15 years ago that California needed four lane highways, and as a result, Sacramento, the San Francisco Bay area, the Los Angeles Basin, and San Diego have been tied together by a system of highways in which much of the mileage can be classed as superhighways.

Route 66 in Illinois is the western link of the proposed interstate project and the object of this thesis is to show the geographical aspects involved in considering route 66 in Illinois as a possible superhighway, and it is in part a brief on the economic problem in the building of such a highway.

B. HISTORY OF ROUTE 66 IN ILLINOIS

During the whole period of land settlement of Illinois, wagon roads were slowly extended into the hinterland and by 1838, the trail known in the southern part of the state as the "Old Chicago Road"[1], and in Chicago as

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[1] "Trails to Rails" by Carlton J. Corliss, Illinois Central System. p. 14.

"Archers Avenue", was laid out from Springfield to Chicago via Bloomington and Joliet. This road connecting with one previously built from St. Louis to Springfield thus became the first overland trail from St. Louis to Chicago. Today, U. S. highway 66 follows much of this original route.

The accounts written by early travelers on this highway show that it was like every other rural road in Illinois at that time.[2] At many times of the year, it was an impassable quagmire. It was little more than a wagon track across the open prairie and it cost very little to construct. Though designated as a road by governing authorities, it was not drained, surfaced, or maintained in any form. As a result, the rich black earth which is so suitable for growing cash grain crops proved a great liability to farmers when they tried to get those crops to market. The prairie soils, when sprinkled with rain, could turn the best roads into interminable sloughs at any time.

C. FIRST IMPROVEMENTS

The first real effort to improve highways in Illinois was in the late 1830's when the western extension of the Cumberland Road was completed by the Federal government from Vincennes, Indiana to Vandalia. It was graded and drained, but not paved. Soon after its completion, an era of privately owned toll roads began in Illinois. Most of these highways were built of plank, and by 1851 there were 600 miles of plank roads in Illinois. Most of them were located in the Chicago area, but they radiated from every important municipality. On the route of present day U. S. 66, they extended southwest from Chicago for six miles, north of East St. Louis for three miles, and north and south of Springfield, Joliet, and Bloomington for distances up to four miles. Few of the turnpikes were profitable enterprises, and the era of plank roads was short-lived. Soon after they were built, the railroads took much of

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[2]Ibid. p. 21.

their traffic away by offering a vastly superior service. Few turnpikes could stand this competition, and most of them fell into disrepair.

Thus, the first great effort to improve Illinois roads was a failure, and very little was done to improve rural highways for several decades. By 1870, although there were more rural roads than ever they were in worse condition than those of thirty years before. Originally the routes had been very wide to allow the wagons to go around ruts and holes. But as the land was fenced in by the farmers, the roadways were constricted and it became impossible to go around the ruts. Although the Old Chicago Road had been declared a state road, it remained only a dirt track, and it was still almost impossible to drive a team of horses from St. Louis to Chicago in the springtime.[3] Even as late as the turn of the century while many city streets were paved with cobblestone, granite block, woodblocks, brick, or macadam, the rural routes were little better than those of a century earlier. While the Old Chicago Road had been drained and improved, travelers on it were still liable to get bogged down between settlements.

C. ADMINISTRATION OF HIGHWAYS IN ILLINOIS

From the beginning of American settlement in Illinois, the organization of government has given much of the responsibility for the maintenance and construction of roads to local governments. At first authority was given to the justices of the peace. In 1848 in those counties organized by townships, the authority for highways came under supervision of the townships. In the remaining counties, road districts about the size of townships were formed in 1872. These local agencies maintained all state roads within their boundaries. The principal of decentralized control has played a conspicuous part in our highway system.

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[3] "Trails to Rails" by Carlton J. Corliss, Illinois Central System. p. 29.

The first effort toward centralizing the administration of highways occurred in 1903 when a good-roads commission was appointed by the General Assembly to investigate the problems of rural road construction and to determine the best methods of financing road work. The fact that wide differences existed among townships, both in the amount and type of roads, was becoming increasingly apparent. Thus the condition of the Old Chicago Road varied greatly from township to township. The good-roads commission pointed out, among other things, the defects of the decentralized township pattern.

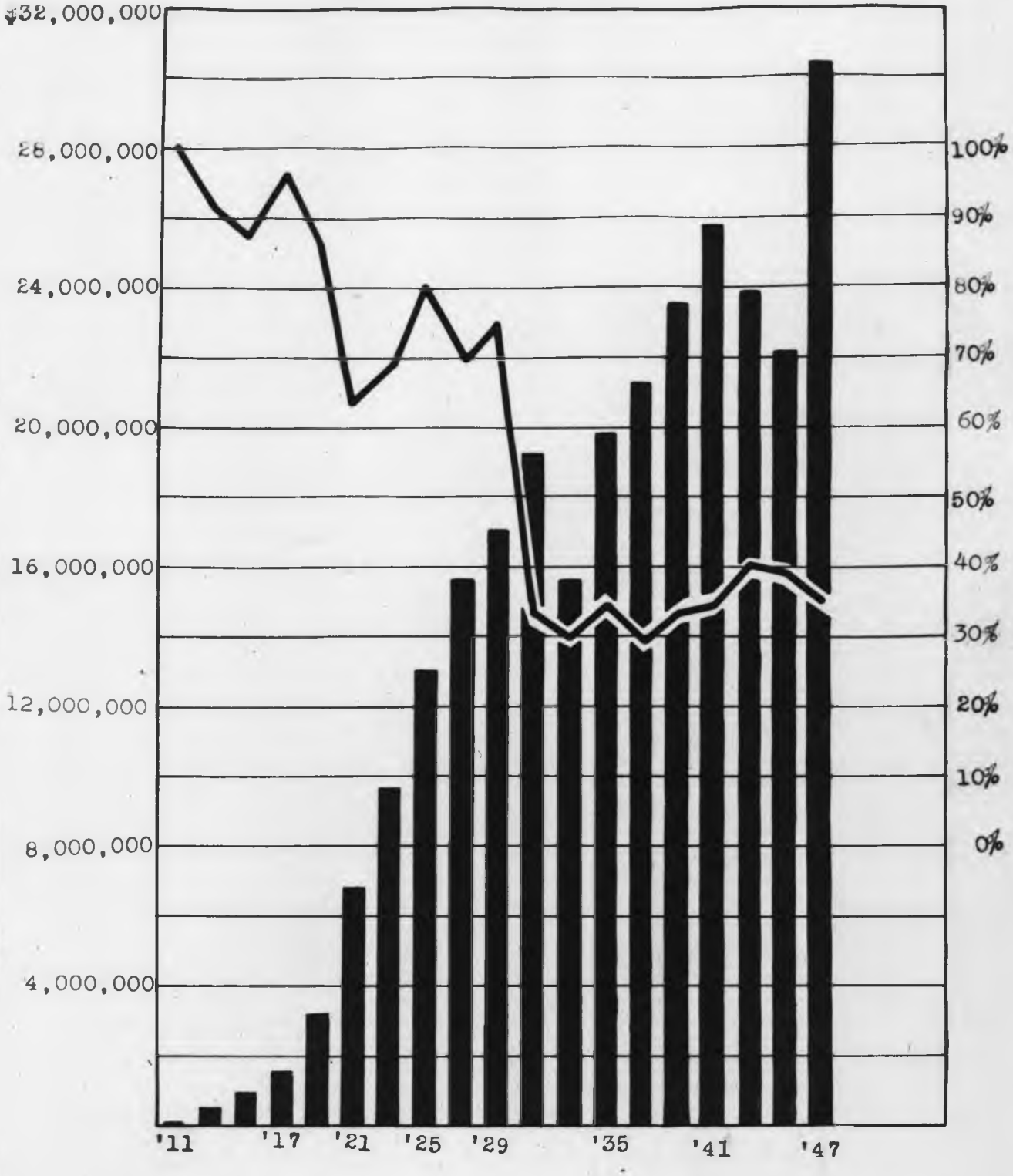
In 1905, the first state highway commission was organized, its duties being chiefly of an advisory and educational nature. In 1913, a new law gave more power to the commission which enabled it to become an active engineering organization. This law also created a "state aid" system of highways which was to be financed with joint state and county funds. Most of the early roads of this system were paved with gravel. The Old Chicago Road was included in this

plan and much of the highway from Chicago to St. Louis thus became an "all-weather" road.

Funds for the state's share of state-aid projects was to come from motor vehicle license fees, a tax which has been used in Illinois since 1911. Until 1919, these fees were the only important source of highway revenue. After the bond issues in 1918 and 1924, it was decreed that payments on the interest and principal of the issues was to have first call on the license fees. Since 1919, while yearly funds from this source have increased, their relative importance has declined. In 1947 license fees comprised 35 per cent of all highway revenue, and $30,511,733 was collected from this source. See Figure 2.

In 1917, the adoption of the "Administrative Code" did away with the State Highway Commission, supplanting it with the Division of Highways in the Department of Public Works and Buildings. Several bureaus and ten district offices were created at this time. Since then, the administrative structure of

Figure 2. Biennial funds from motor vehicle registration fees and per cent of these receipts to total of all funds for highway purposes in Illinois. 1911 - 1947.




Source: Data furnished by Bureau of Highway Reserch, Illinois.

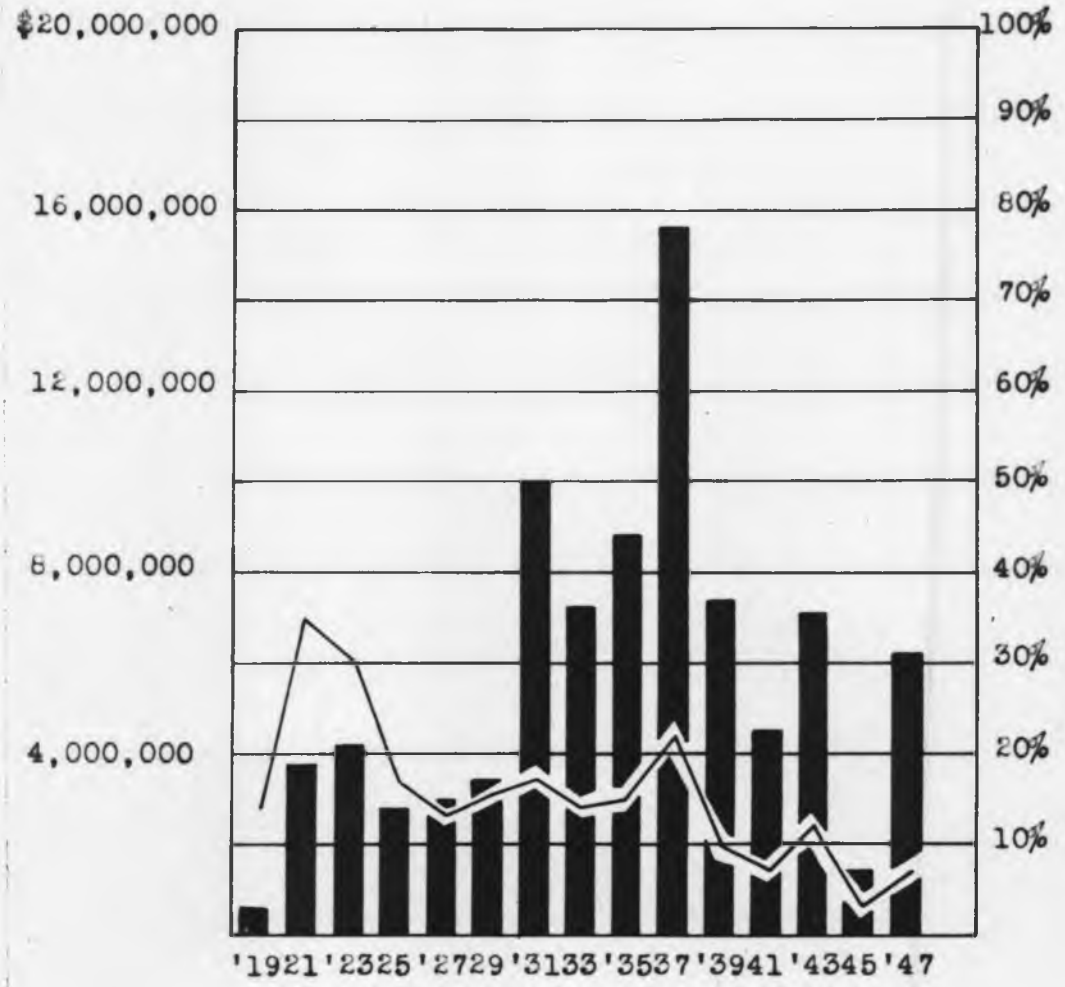
Illinois highways has not changed materially.

D. THE PRIMARY SYSTEM

The year 1916 marked the passage of the first Federal Aid Road Act by the Congress. Since that time, the national government has kept a constant flow of funds of varying amounts to the states for their use in constructing rural highways. The provisions of Federal Aid Acts call for the states to match federal funds with an equal amount. The first Federal Aid Act funds could not be used for buying right-of-way or for maintenance purposes. The act further provided that the funds must be spent within five years of the time when they become available, or be forfeited. The funds could not pay for more than half of any one construction job. Federal aid to this state has varied greatly since Illinois first made use of these funds in 1919. While payments were greatest during the depression, there has been a decline in the relative importance of federal aid. See Figure 3.

A large amount of federal aid money was spent on paving U. S. 66 with high type cement concrete surfacing. On this route, Federal aid project No. 25 covered work from Chicago to Bloomington; project No. 26, from Bloomington to Springfield; project No. 166, from Springfield to Litchfield; project No. 115, from Litchfield to Hamel; and project No. 6, from Hamel to East St. Louis. Thus, all of the rural portions of route 66 became a federal aid route when a federal aid highway system was designated for Illinois in 1921. In that year a total of 6,774 miles of rural highways in Illinois were classified as such. In 1938, this was extended to include 1,258 miles of city streets. Since 1921 this system has been expanded three times, and in 1947 it comprised a total of 7,923 miles.

Figure 3. Biennial federal aid expenditures in Illinois and percentage of these receipts to total available funds for highways. 1919 - 1949




Source: Bureau of Highway Reserch, Illinois Division of Highways.

E. STATE BOND ISSUES

In 1918 it was apparent that there were not enough funds available to match federal grants and that furthermore, the state aid system of improved highways was not progressing fast enough to keep up with the increasing demands for better roads.

To meet the matching requirements of the Federal Aid Act, and to build a system of trunk highways, the state sold a $60,000,000 bond issue in 1918. The principal and interest on this issue was to be paid by future motor vehicle registration fees.

The Old Chicago Road was one of the first routes to benefit from this issue, and it became known as State Bond Issue route number four. The right-of-way of this route varied in width from 66 to 100 feet, the shoulders were stabilized and the pavement was 18 feet wide and built of concrete, costing about $30,000 per mile. As has been noted, it was partially paid for by federal aid funds. However, no sub-grade or gravel road bed was built under the pavement. From this bond issue, 167.5 miles of route 66 was constructed, and the paved road extended from Chicago to Springfield and from East St. Louis to Hamel.

In 1924, an issue of bonds at $100,000,000 to build an additional 5,000 miles of trunk highways in the primary system of Illinois was ratified by the voters. This allowed many state bond issue routes including route 66 to be completed. Soon after, the road from Springfield to Hamel was finished and East St. Louis was connected to Chicago by a concrete cement highway.

F. RESULTS OF THE BOND ISSUE

Thirty years ago it was a popular misconception that concrete cement highways would last a lifetime. We have seen, however, that concrete highways do not last a lifetime. On the contrary, after ten years, it costs considerable to maintain them, and they rarely last more than thirty years. Today, the

design, width, and structure of roads built in 1920 are obsolete and those roads in the primary system today that are thirty years old are so broken, bumpy and cracked that they are past their useful life.

Authorities have given various estimates of the mileage of primary highways in Illinois that is obsolete. According to Griffenhagen and Associates[4], of the 10,460 miles in the system in 1947, 5,365 or 51 per cent of the total rural primary system was obsolete. They estimate the cost of improving these highways will be $669,303,858.

In 1920, no one could foretell the changes in types of vehicles nor could they foresee the enormous increase in traffic. Pavements usually were laid out across the black prairie soil without proper roadbeds, thus exposing them to the full forces of moisture, the worst enemy of a highway. Soon these pavements were broken and cracked by frost heaving and pumping. The bumps, holes, and cracks in the pavement caused by nature were then exposed to the ceaseless pounding of heavy trucks and fast moving automobiles. Naturally, the heavier traveled roads such as route 66, wore out at an accelerated rate. In this manner, many of the primary roads were out before they had been paid for. On route 66, starting at a point five miles south of Springfield, a new highway 24.5 miles in length runs parallel to the bed of the bond issue route which is now abandoned but will not be paid for until 1959.

This is certainly a bad feature of the bond issue. Of course, at the time of the issue, Illinois was in desperate need of highways and this was the only feasible means of financing them. Although these bond issues did enable the state to have a primary system called the best in the world in 1930, there have been negative results from the issues. Until 1969, a large portion of

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[4] "A Highway Improvement Program for Illinois" by Griffenhagen and Associates, State Department of Public Works and Buildings, Division of Highways, 1947. p. 112.

available funds must be spent in paying the principal and interest of the second bond issue. See Figure 4.

6. THE GASOLINE TAX

The primary system was not completed by the $160,000,000 in bond issues and by 1929 the high cost of maintenance was becoming evident. Thus, the need for more funds was evident. The gasoline tax was imposed by the General Assembly and declared constitutional in the courts in the following year. Since then every gallon of motor fuel sold in Illinois has been taxed three cents. Soon after its passage, this tax became the greatest single source of revenue to the Division of Highways. In 1947, it amounted to almost $46,000,000, one third of which was to be spent on the primary highways. Figure 5 shows the biennial receipts from this source and its relative importance to the total available highway funds. Figure 6 shows the biennial receipts of the Division of Highways

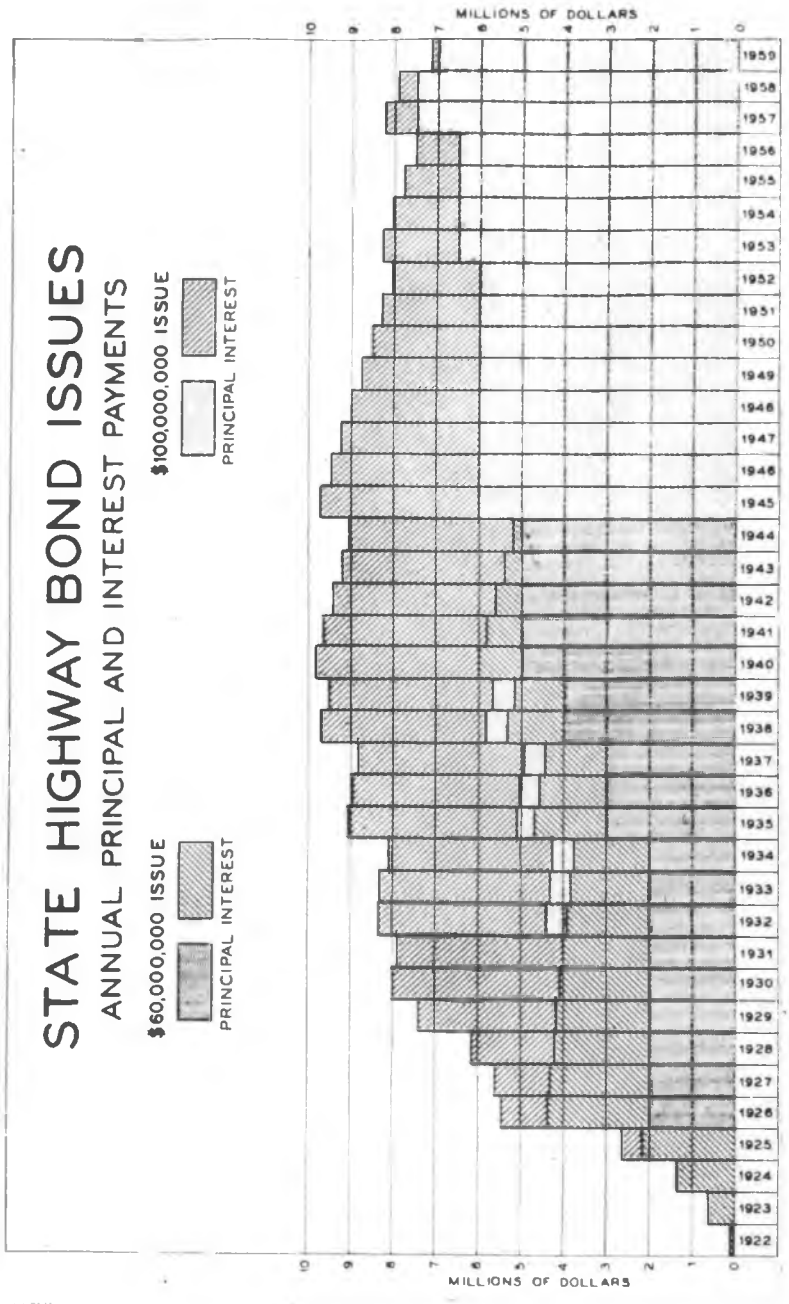
from the motor fuel tax, motor vehicle registration fees and from federal aid. This graph shows clearly the relative importance of the motor fuel tax in relation to other main sources of income.

Only one third of the receipts from the gasoline tax goes to the primary highway system. Figure 7 shows the results of splitting this fund among the various elements of our decentralized highway administration. In 1947, although the Division of Highways took in 94 million dollars, expenditures amounted to only 51 million dollars, the difference presumably going to local authorities.

There are many exponents of a more centralized form of road administration for Illinois who think this would allow more funds to be spent on the primary system. Illinois allocates a higher percentage of its motor fuel taxes to local agencies than does any other state. While decentralization undoubtedly does waste some money, it should be pointed out that it cost more money to maintain local roads in Illinois than in most states. More roads in Illinois are paved than in any other state because dirt roads in this state cannot be kept

Figure 4

Credit: THE DIVISION OF HIGHWAYS



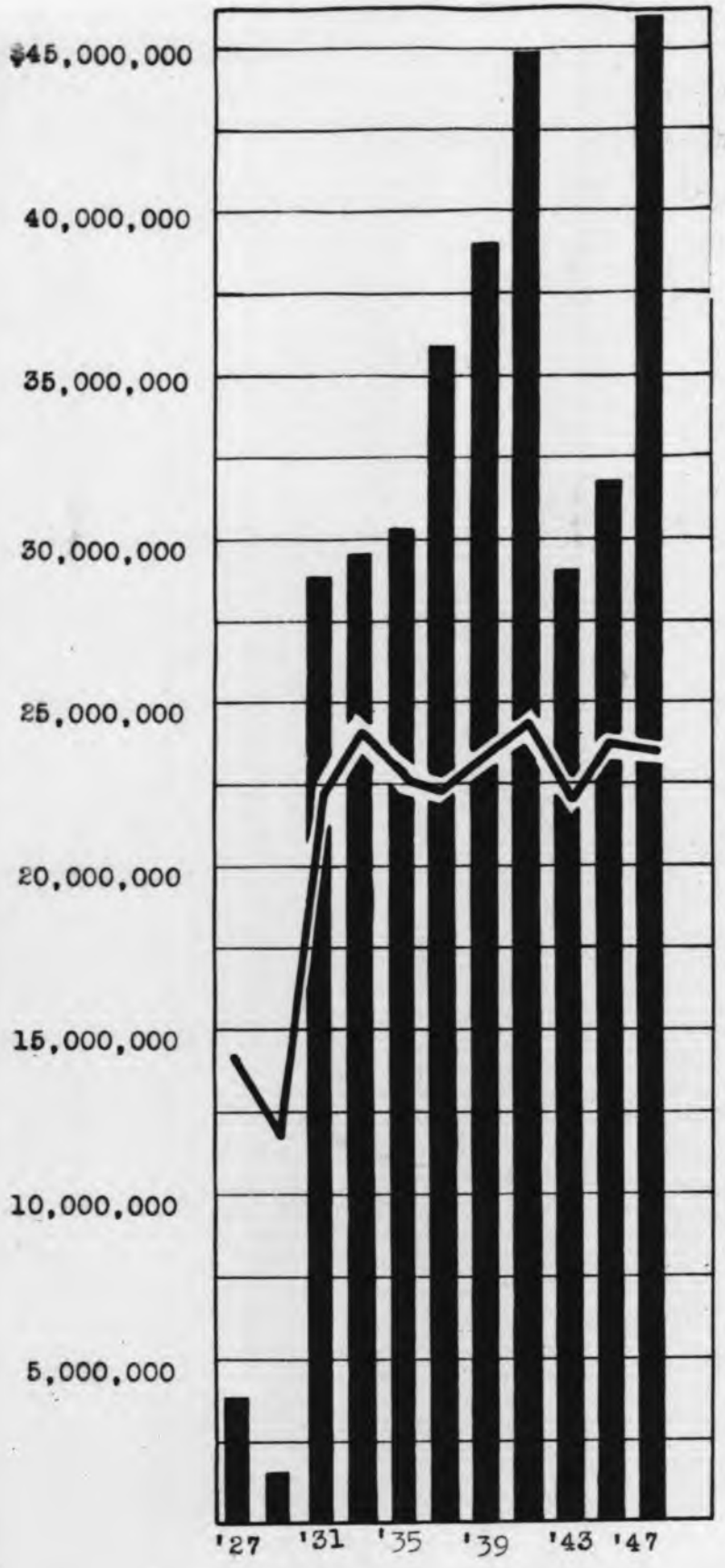



Figure 5. Biennial receipts from motor fuel taxes in Illinois and their percentage to the total available highway funds. 1927 - 1947.

Source: Bureau of Highway Reserch, Illinois Division of Highways.

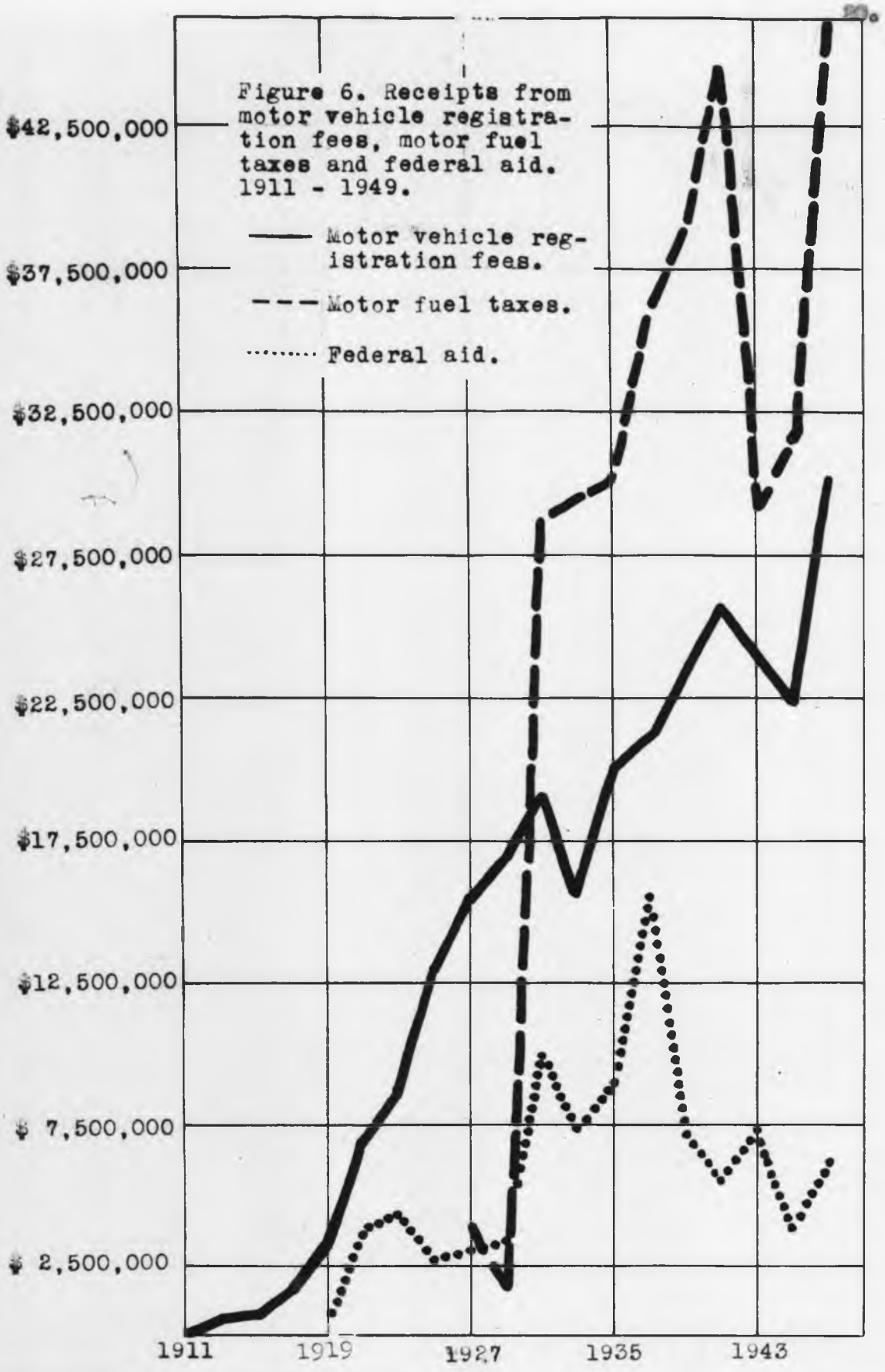
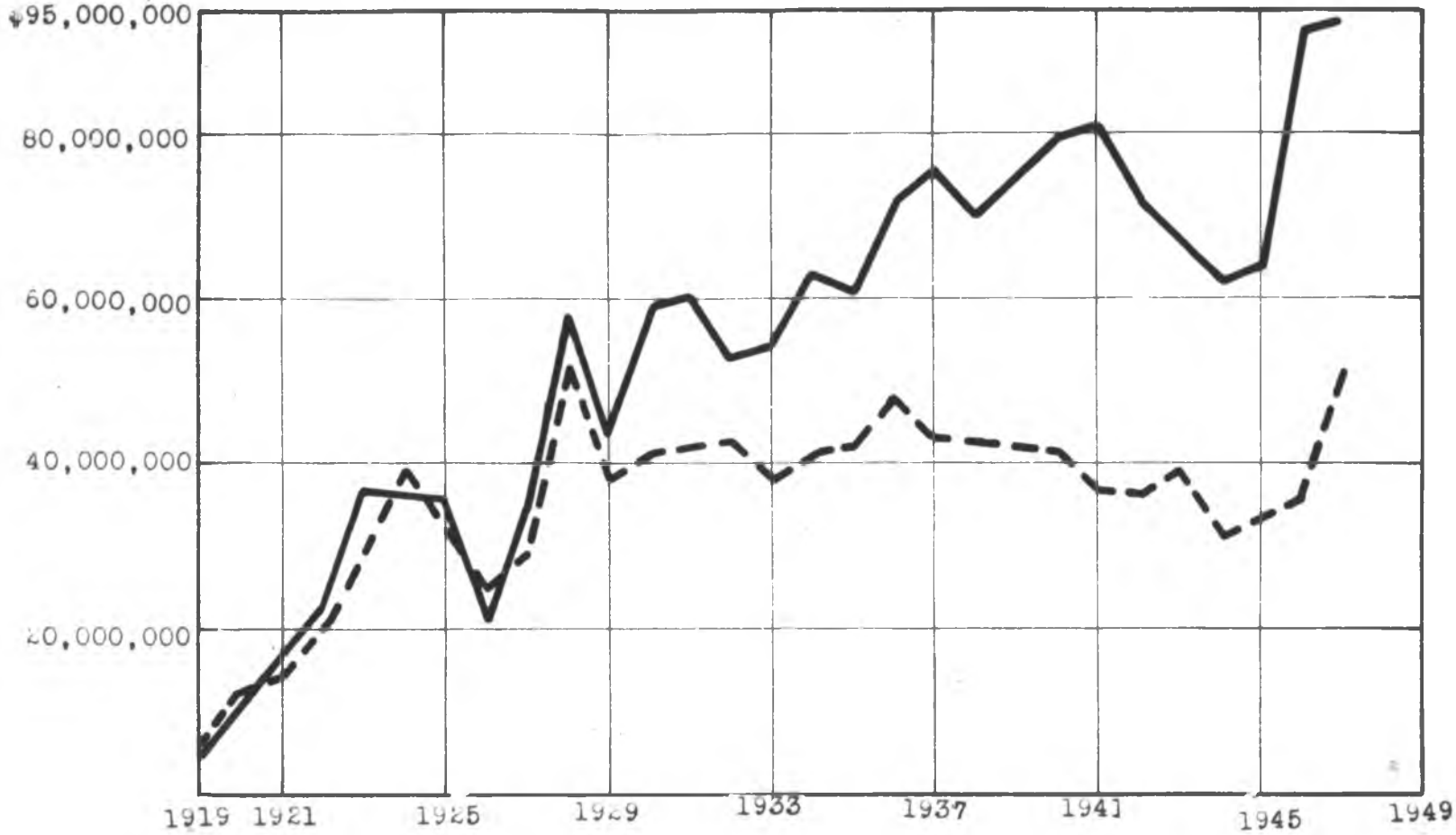



Figure 6. Receipts from motor vehicle registration fees, motor fuel taxes and federal aid. 1911 - 1949.

Source: Bureau of Highway Reserch, Illinois Division of Highways.

Figure 7. Trends in state revenue for highway purposes and in expenditures by the Division of Highways. 1919 - 1947




Source: Division of Highways, Department of Public Works and Buildings.

open the year around due to the nature of the soil. Gravel in some areas is scarce and the cost of transporting it is high, thus the cost of secondary roads in Illinois is high and all funds allocated to local agencies by the Division of Highways are put to good use.

M. MAINTENANCE OF PRIMARY HIGHWAYS

In 1947, antiquated as it was, the Illinois primary system was valued at $1,359,047,692. Naturally, as much money as practicable is used to maintain this expensive government utility. It has already been pointed out that maintenance costs increase as the roads become older. Since 1940, many primary roads have worn out. As a result of the war highway construction was cut drastically and maintenance costs rose sharply in the Division's effort to keep the roads open. It was during this period that it became impossible to maintain large portions of route 66, and this was one of the few highways in

the country to be reconstructed during the war. The war set back reconstruction five years, and since then the program has been further retarded by the high cost of materials and labor.

Until the time when Illinois highways can be rebuilt, the highway division has instituted many stop-gap measures to keep the roads open. The usual practice of maintaing obsolete highways is to patch the sections that have worn out. Often the division will widen existing high-surface. A third practice is to resurface the old road with a layer of bituminous concrete cement three inches thick. On the roads that have well drained sub-grades the patching and then resurfacing may add fifteen years to their lives. In many cases, however, these maintenance practices are merely expensive stop-gap measures to keep the roads open. In 1948 twice as much money was spent in such repairs as on new construction, and the trend has continued to rise since then, threatening to take all available funds. Recently, Charles P. Casey, Director of Public Works and Buildings, threatened to close off one third of the primary system until

such time as it can be rebuilt. He claimed that these roads were beyond repair and were too costly to maintain. The system's need for increased funds is acute. Nothing points this out so clearly as the fact that the Department, with its present funds, cannot match a federal aid grant of $8,000,000. The matching funds must be raised by June 1951 or the grant will be forfeited. The Department says it will not be able to raise that money.

I. CONSTRUCTION OF SUPERHIGHWAYS IN ILLINOIS

A road in Illinois has to have an average traffic volume of 5,000 vehicles per day before the Highway Division will consider building a four-lane pavement. Using this figure as a base, only 179 miles of superhighway construction was needed in 1947. Most of this is in the Chicago Metropolitan area. In Indiana, a state that has more miles of superhighway than any other except California, plans are being carried out to construct superhighways on every rural road carrying over 3,500 vehicles per day. If Indiana standards were used in Illinois, there would be an immediate need for 800 miles of superhighways in this state, including all of route 66 from Chicago to St. Louis.

Despite the high standards of traffic volume to build a superhighway in this state, their eventual construction is being planned on a conservative basis by the Division of Highways. The first step toward their eventual construction occurred in 1945 with the passage by the General Assembly of the Illinois Freeways Act. This act provided that 680 miles of rural highway, including route 66 from the Chicago limits to Hamel, be designated as "Freeways." On such roads, access is limited to certain intersections, and is not allowed to abutting property, such as gas stations, tourist cabins, taverns and restaurants. One finds signs posted along route 66 that state, "This highway has been denoted a freeway as provided in the Freeway Act of 1945. Direct access will not be granted. Investigate requirements before improving abutting property..." Figure 8 shows the location of Freeways in Illinois.

Credit: THE DIVISION OF HIGHWAYS

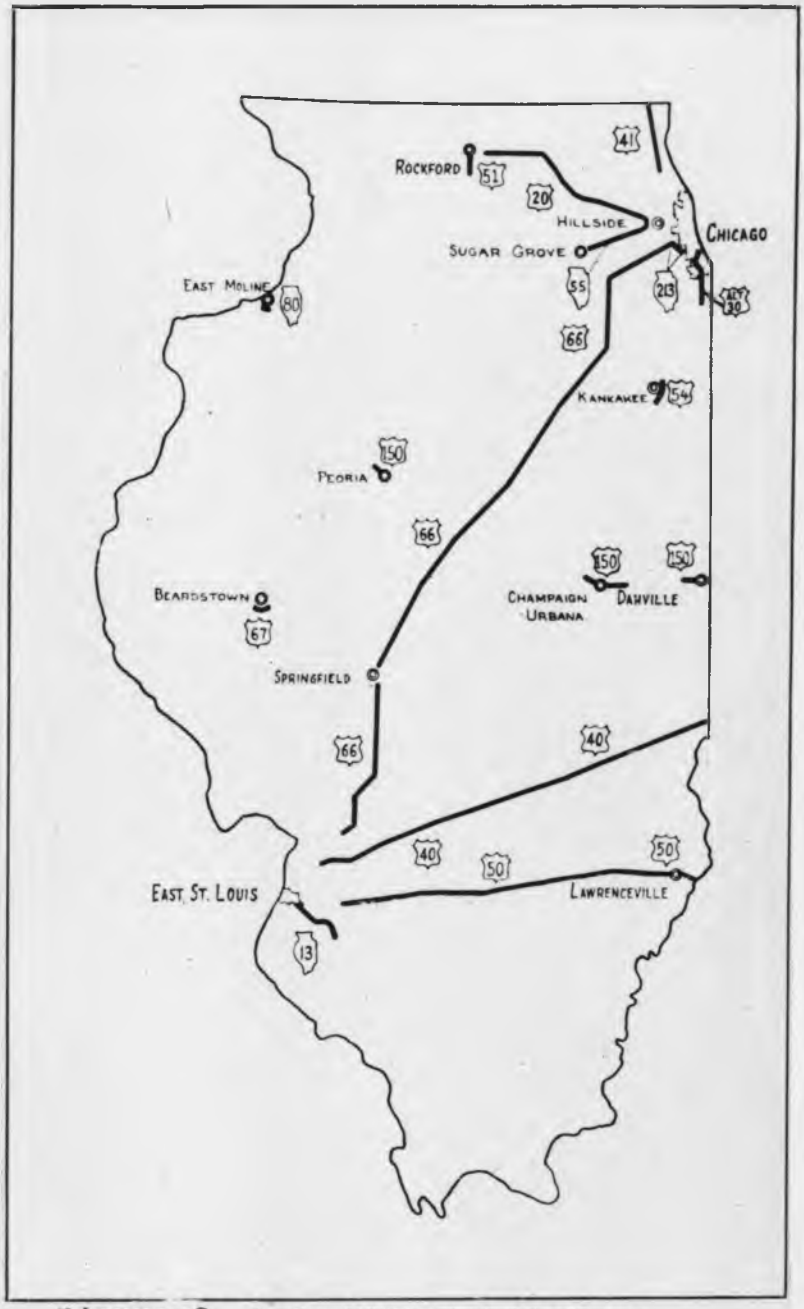



Figure 8 — Location of highways designated as freeways.

In 1944, Congress passed a federal aid highway act that designated a national system of interstate highways[5]. This act authorized an interstate system of not more than 40,000 miles, located to connect directly as practicable the principal metropolitan areas, to serve the national defense, and to connect the boarder points with routes of continental importance in Canada and Mexico. While this system comprises only 1.1 per cent of the rural roads, it carries 20 per cent of all rural traffic. In 1947 1,565 miles in Illinois including all of route 66 from Chicago to St. Louis, was approved for this system. See Figure 9. It has been the policy of the Highway Division to reconstruct the freeways first in its post-war program. Thus route 66 has been one of the first roads to benefit from State aid funds, state bond issue funds, and federal aid funds, and one of the few roads in Illinois to benefit from post war construction. Since 1943, a total of 135.3 miles of route 66 have been completely rebuilt.

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[5] This act was the outcome of two special reports to the Congress; "Toll Roads and Free Roads," by the Bureau of Public Roads (now the Public Roads Administration) in 1939; and the Report of the National Interregional Highway Committee in 1944 by a special committee of highway authorities appointed by the President. Both reports found that certain of the nation's highways are, because of their geographic positions, of outstanding importance as carriers of interstate and other long range traffic and there is an urgent need for improving them to standards commensurate with their potential usefulness.

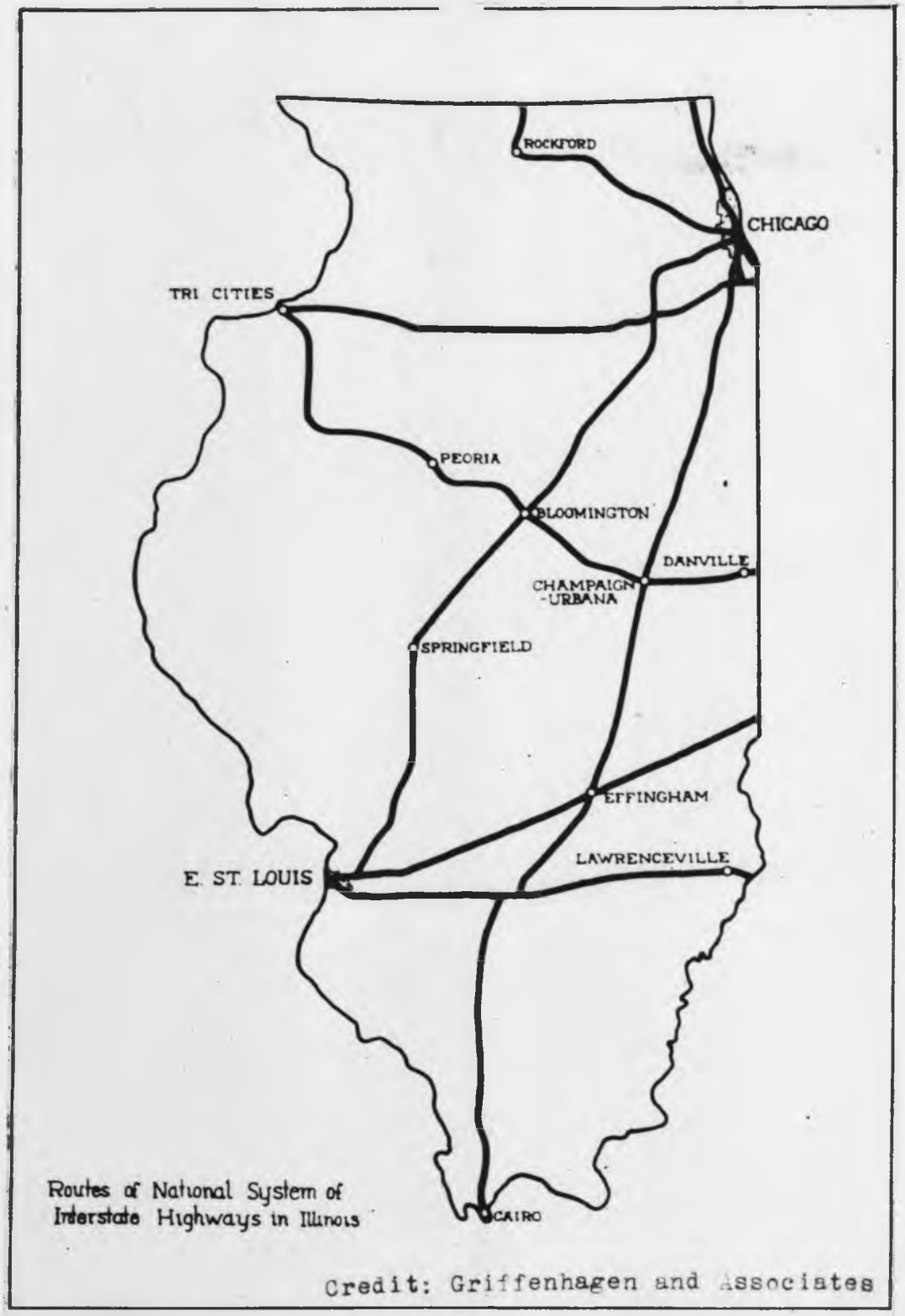
ROCKFORD
CHICAGO
TRI CITIES
PEORIA
BLOOMINGTON
DANVILLE
CHAMPAIGN
-URBANA
SPRINGFIELD
EFFINGHAM
LAWRENCEVILLE
E. ST. LOUIS
CAIRO
Routes of National System of
Interstate Highways in Illinois
Credit: Griffenhagen and Associates

**FIGURE 9**

# CHAPTER II

## ROUTE 66

### A. INTRASTATE IMPORTANCE OF ROUTE 66

Because of its geographic location and its economic importance, route 66 deserves a high rank among the nation's roads. Traversing seven states, connecting Chicago, the second largest city in the United States with St. Louis, the eighth largest, and Los Angeles, the third largest, it also serves the important regional cities of Bloomington and Springfield, Illinois, Springfield and Joplin, Missouri, Tulsa and Oklahoma City, Oklahoma, Amarillo, Texas, Albuquerque, New Mexico, Flagstaff and Kingman, Arizona, and San Bernadino, California. See Figure 10.

Route 66 is the most important highway connecting the industrial northeast with the southwest, rich in mineral and agricultural wealth, and Southern California. Although the route is not the shortest one between its two terminals, it is the quickest, for it follows the easiest path across the Rocky Mountains. Climatically, it is the best transcontinental route, for it is located to the south of the severe winter storm area, and of all transcontinental routes, it is kept open most easily in all seasons.[1]

The route passes through regions of extremely high temperatures during the summer months and the only weather station on the route that has not recorded temperatures of over 100 degrees is Flagstaff, Arizona, probably due to

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[1] This does not mean to imply that there are no severe grades on route 66, nor that the road is on fairly level terrain from one end to the other. Route 66 crosses several high passes in New Mexico, Arizona, and California and passes through a number of areas that commonly have harsh winters and large amounts of snow in mountains. Flagstaff, Arizona may have snowfall anytime between mid September and mid June. The average January temperature of this station is below freezing, and much of the precipitation, which averages over 20 inches annually, falls in the form of snow. This is the only station on route 66 west of Springfield, Illinois, which has below freezing average temperatures in January. The coldest recorded temperature there is 30 degrees below zero. The coldest recording of any station along the route is at Lincoln, Illinois - 35 degrees below zero.

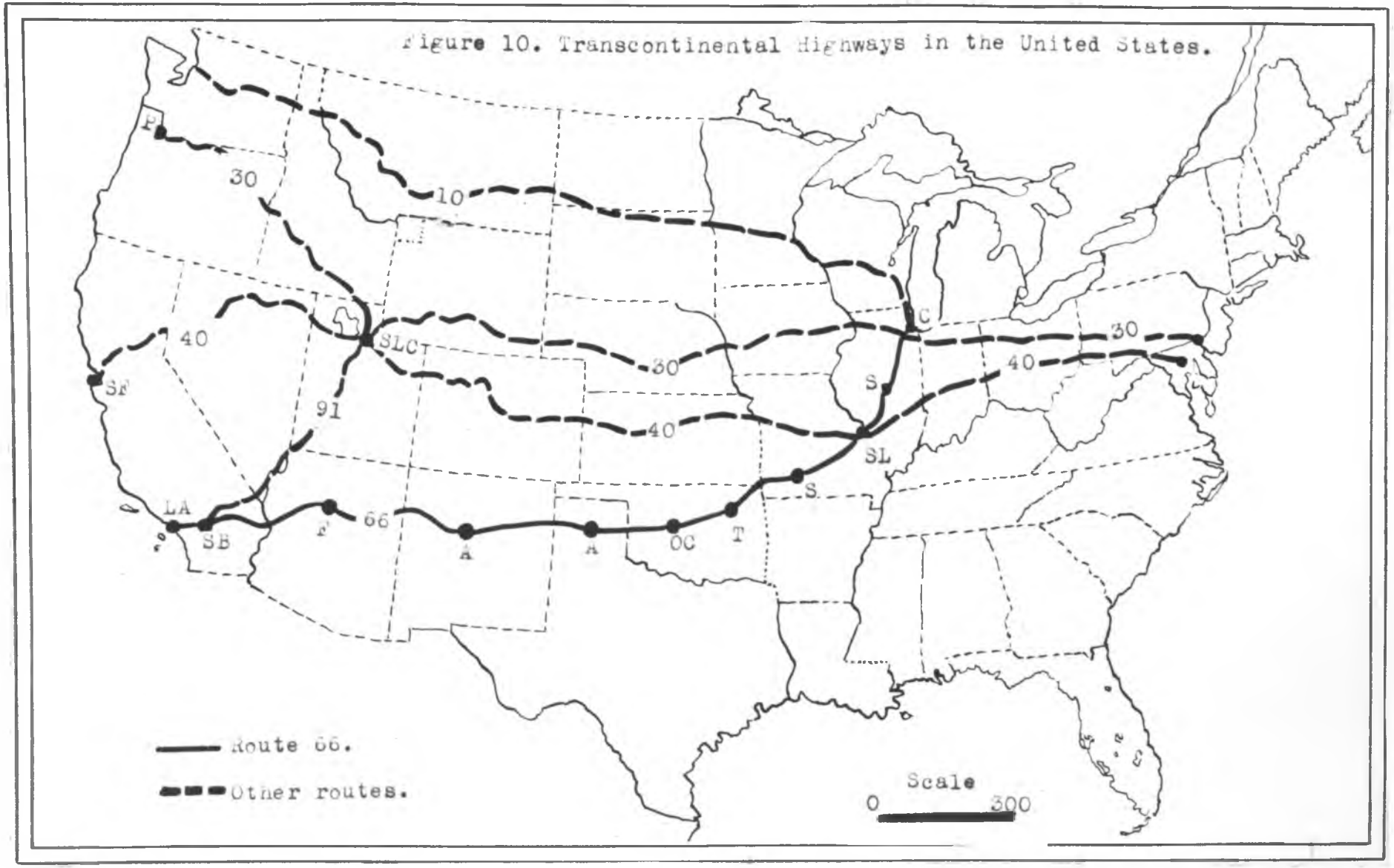



Figure 10. Transcontinental Highways in the United States.

its high elevation. Nevertheless, the hot weather found along route 66 in the summer is also found on portions of all other routes.

For the tourists and vacationers that make up a large proportion of transcontinental traffic, the scenic grandeur of the south rim of the Grand Canyon can most easily be reached by motorists on this highway and it leads directly to the playground of Southern California.

Regularly scheduled transcontinental buses use this artery of transportation from Chicago to Los Angeles. Transcontinental truck traffic is becoming increasingly important, and must be considered when reckoning its economic importance. The Pacific Intermountain Express Company, probably the longest freight hauler by truck in the United States, rolls diesel-engined carriers over the route, making the distance from Chicago to Los Angeles in five days. Early in 1947, this company had 136 tractors and 221 semi-trailers in which they hauled mostly frozen food and refrigerated meats. Some automobiles are hauled over the entire route also.

Trucking firms rarely contract hauls more than 1,000 miles. Therefore few of the trucks running on route 66 go the entire length of the road, but carry instead intercity goods. Thus, the regional cities of Springfield, Illinois, Joplin, Missouri, Tulsa and Oklahoma City, Oklahoma, and Amarillo, Texas are important truck terminals, and truck traffic between these cities is considerable.

Route 66, then is economically important because it services many important terminals for both freight and passengers alike. It is the best transcontinental route from the standpoint of time and climate; it leads to the scenic wonders of the Grand Canyon and the playground of Southern California, so is used extensively by vacationers and tourists; it connects three very important and diverse regions and it is the best route between the three great metropolitan districts of Chicago, St. Louis, and Los Angeles.

B. HIGHWAY CONDITIONS OF ROUTE 66 WEST OF ST. LOUIS

The road is not known for its fine engineering qualities. Indeed, it might be better known for its lack of them, especially in the light of its economic importance in carrying a large share of all transcontinental highway traffic.

The best constructed portions of the highway are found in California where a four lane highway from Los Angeles to San Bernadino was completed by 1955. This is a distance of 59 miles. Since 1947, the Arroyo Seco six lane dual speedway has carried this road's traffic from Pasadena to Los Angeles. Between Pasadena and San Bernadino, it is known as "Foothill Boulevard." Recently, this segment was completely resurfaced with bituminous concrete cement. Although it is not a dual lane parkway, it is in excellent condition.

Route 66 climbs out of the San Gabriel valley north of San Bernadino and traverses the San Gabriel mountains via El Cajon pass. The road from here passes through Barstow in the Mojave desert and then descends to Needles on the Colorado River. This portion is two lane, cement, 22 feet wide, and in good condition.

The highway in Arizona varies in condition from good to very poor. From Needles, it slowly climbs to Ashfork, on the edge of the desert, passing through Kingman and Seligman. To avoid the daylight heat of the desert, most motorists drive between San Bernadino and Ashfork at night, a distance of 400 miles. Portions of the Arizona section are built of brick, though most is of concrete. Probably due to the heavy night traffic, this is one of the most dangerous roads in the United States. West of Ashfork, on a mountainous portion is a long S curve and outback that is known as "Murder Curve." Since 1930, 172 persons have been killed on this spot.

Much of the highway in Arizona and New Mexico is obsolete. Except for limited local areas where it has been widened, it is built of concrete or brick only 18 feet wide. Much of it in these states passes through sparsely populated mountain and high plateau regions and does not descend to the great plains until it cross the continental divide by a high wide gap in eastern New Mexico.

In the Texas panhandle, this roadway is built of two lane concrete 18 feet wide. However, the shoulders are heavily graveled, and on the whole, it is in fair condition. Most of the highway in Oklahoma and Missouri are also of this type. In the former, though, there are ambitious plans for the improvement of route 66. Within two years, a toll road superhighway will be built from Tulsa to Oklahoma City. This road, 119 miles in length, will run parallel to route 66.

In spite of the good highways in California and the proposed to road in Oklahoma, large portions of route 66 west of the St. Louis metropolitan district are, and will remain obsolete. While there will never be a need for superhighways on most portions west of St. Louis, there is a definite need for modern roads with a minimum pavement width of 24 feet. In spite of its importance geographically, the economic use of the road will never by fully realised until its obsolescent pavements and dangerous grades and curves are changed.

C. HIGHWAY CONDITIONS ON ROUTE 66 IN ILLINOIS

The overall condition of route 66 is better in Illinois than in any other state except California but when compared with that state, it ranks a poor second. Illinois has no road to bring traffic off route 66 into Chicago such as California has in the Arroyo Seco Speedway. While route 66 has 59 miles of superhighway leading to Los Angeles, it has only 16 miles leading to Chicago, and six of these miles are in poor condition. It should be noted, however, that the road in California follows the San Gabriel valley and passes through many towns

and cities while route 66 in Illinois by-passes all of the cities on the Chicago perimeter.

CHICAGO TO GARDNER

Route 66 is a freeway from a point a mile west of the Chicago city limits to within 30 miles of the city of St. Louis. From the Chicago city limits to the junction of Illinois route 83, is a distance of ten miles. On this segment of highway, route 66 is a four lane road which has been resurfaced with bituminous concrete cement in 1948. Though the road is in excellent condition, it passes through a suburban zone where there are many homes, restaurants and small businesses. Intersections are at frequent intervals and there are five traffic lights on this section.

West of the junction with Illinois route 83, a segment of poorly conditioned four lane highway begins. The outside lanes are almost unusable due to the many cracks and bumps found in them. Tarvia patches have made this condition worse. This road should be patched with cement and resurfaced with bituminous concrete cement. There is one traffic light in this area and the residential district thins out through here.

At a point 16 miles from the Chicago City limits, the four lane highway branches off toward Joliet and the main route becomes a two lane concrete highway that has been repaved with bituminous concrete cement. It is 22 feet wide and extends for a distance of 17 miles. The road is in good condition. There is one traffic light at Plainfield and six important intersections on this portion of the route.

The pavement is built of concrete cement from the junction of route U. S. 52 to Gardner, a distance of 27 miles. Some small portions of this road have been resurfaced with bituminous materials. The condition is fair, but it is beginning to show evidences of deterioration. A traffic light is at the junction of route 52. There is approximately a mile of four lane highway on

this road. The highway grade separation at the junction of U. S. route 6 is a four lane highway as is a railroad grade crossing and a bridge over the Kankakee River. On these portions, the road has been resurfaced with bituminous material. The road crosses the Des Plains River over a long causeway and three span bridge. Here the pavement has the narrow width of 20 feet.

Between this point and Gardner the road has been widened to a width of 24 feet in some places. There are four railroad grade crossings on this part of the road and seven important intersections. At a point 19 miles south of the junction with route 52, the course of the road begins to parallel the tracks of the Gulf, Mobile, and Ohio Railroad. Route 66 runs parallel to these tracks practically all the way from this point to Springfield.

GARDNER TO BLOOMINGTON

From Gardner to the Bloomington by-pass is a distance of 51.7 miles on route 66. Of this mileage, 19.4 miles were built during the war and the rest in 1946 and 1947. This road is built of cement concrete ten inches thick and is reinforced with steel mesh. It has a gravel subgrade two feet thick. The pavement is 24 feet wide and the shoulders are bread. All structures are wide. This road has many aspects of a superhighway and has no hazards such as sharp curves, steep grades and blind intersections. The most important advantage of that of four lanes - is missing, however. The road is in excellent condition, although those portions built during the war are beginning to show wear. This new road parallels the old one, which has been torn up and dumped into huge piles. The Division of Highways hopes to salvage this and use it in building an additional two lanes on route 66 "at some time in the future", thus making it into a superhighway. There are five of these salvage piles between Gardner and Bloomington.

This 51.7 mile portion of route 66 by-passes the seven villages and towns of Dwight, Odel, Pontiac, Ocoya, Chenoa, Lexington, and Towanda. There are

13 important intersections on this part of the road, four of which are marked by caution lights. There is one highway grade separation. Four little used railroad spurs cross at grade.

BLOOMINGTON BY-PASS

The eight mile by-pass of Bloomington is a dual lane superhighway. Access to it is gained only at either end and at the junction of U. S. route 150, where traffic is controlled by a traffic light. There are two railroad grade separations and four highway grade separations on this road.

BLOOMINGTON TO LINCOLN

The distance from the end of the Bloomington by-pass to the beginning of the Lincoln by-pass is 26 miles. Except for the mile nearest Lincoln, this highway is the same design as that between Gardner and Bloomington. It was built in 1948. The remains of the old road have been dumped into three salvage piles, but several of the old structures remain, offering excellent comparison of the new with the old. McLean and Atlanta are by-passed. There are seven important interchanges on the route; likewise two highway and one railroad grade separations. All of the highway from one mile north of Lincoln to Gardner, a distance of 84.7 miles, is in excellent condition.

The last mile to the Lincoln by-pass is 22 feet wide and was built before the war. In this segment is found a dangerous curve on the down-grade and a blind intersection on the outside curve.

LINCOLN BY-PASS

The Lincoln by-pass is 3.7 miles in length. The first 2.1 miles is a dual lane concrete highway and is in excellent condition. On this road there are two grade separations - one highway and one railroad. Two arterial routes and several city streets are crossed. At the junction of Illinois route 10, there is a stop sign, and the dual lane highway comes to an end. The next 1.6 miles is a 20 feet concrete road that is in poor condition. It needs resurfacing

immediately or it will shortly become completely worn out. It crosses railroad tracks at grade, has one important intersection, and numerous city cross streets.

LINCOLN TO SPRINGFIELD

The distance from the end of the Lincoln by-pass to the Springfield belt line is 24.1 miles. There are two dangerous locations on this road. One is a point 20.2 miles south of Lincoln, where a divided highway beings at an important intersection on a blind curve. The other is the junction of route 66 with city 66, a location that is marked only by four way stop signs despite the tremendous amount of traffic. This junction is on a blind curve too. The highway is made up of 5.7 miles of dual lane superhighway, 2.2 miles of four lane highway, and 19.2 miles of two lane cement 24 feet wide. All are in excellent condition. There are six important intersections and, except for the superhighway, it still parallels the old road. Evidence of plans for a future highway can be found in two salvage piles. There is one railroad grade separation. The Sangamon River is spanned by a four lane bridge. The dual lane highways are located in the mile nearest Lincoln and the 3.9 miles nearest Springfield.

SPRINGFIELD BELT LINE

The length of the Springfield by-pass is 9.5 miles. At its northern end, it has 1.1 miles of good four lane highway. On the southern part, there are 0.2 miles of poor four lane construction. The pavement on the rest is poor. It is 20 feet wide and in need of resurfacing and widening. The structures are obsolete. There are three railroad grade separations, but two of them are dangerously steep, curving and narrow. On the southeastern part of the belt line, there is a series of steep grades and sharp curves, where vision is limited. This section is a no passing zone where speed limits of 40 and 45 miles per hour are posted. The by-pass goes through a heavily populated suburban area where many homes, garages, taverns and small shops are located along the

right-of-way. There are six important intersections, several city streets, two caution lights, three stop signs and one highway grade separation along this route. As a by-pass, the belt line is obsolete and inadequate.

SPRINGFIELD TO THE RAYMOND INTERCHANGE

It is a distance of 30.7 miles from Springfield to the Raymond Interchange. On this route are found the following types of pavement:

0.4 miles four lane highway on bridge over lake.

2.7 miles of three lane concrete in poor condition.

17.7 miles of new two lane cement concrete in good condition.

6.9 miles of excellent highway that has been widened to 24 feet and resurfaced with bituminous concrete cement.

1.9 miles of poor two lane cement 20 feet wide.

2.1 miles of 18 feet cement in poor condition. A new road is being built at this location.

Located on this portion of the highway is one caution light, one stop sign, one railroad grade crossing and one railroad grade separation that is in poor condition. On this segment are found four important intersections. The road is marked with two narrow bridges and one crossover. These crossovers occur in the form of an S curve where the new pavement switches from one side of the old road to the other. Barricades, caution signs, speed zones, and no passing sections are found at these dangerous locations. The road does not parallel any railroad right-of-way south of Springfield. Where new roads have been built they are parallel to the old, which has been torn up. There are no state salvage piles along this part of route 66.

RAYMOND INTERCHANGE TO END OF FREEWAY, 3.8 MILES NORTH OF HAMEL

Most of this road is in good condition. The following highway designs are found on this 29 miles portions

19.7 miles of postwar highway - 24 feet wide

0.8 miles of divided highway in excellent condition

0.1 miles of four lane highway in good condition

5.0 miles of 20 feet prewar constructed concrete highway in good condition

3.4 miles of poor prewar highway, 18 feet wide

The following structures are also found on this highway:

By-passes at Litchfield and Mt. Olive

11 important intersections

3 caution lights

2 railroad grade separations, one in poor condition

5 railroad grade crossings

4 dangerous crossovers in addition to some dangerous hills and curves found on the older portions

1 cement salvage pile for use in future construction

The Illinois Freeway portion of route 66 ends at a point 3.8 miles north of Hamel. It also marks the end of recent construction. Only 26.1 miles of this freeway, the total length of which is 252 miles, is substandard. Since 1945, there has been built 133.3 miles of new highway on this road. The freeway also includes 30.2 miles of superhighway that is in excellent condition, and 82.4 miles of two lane highway that is in fair to good condition.

END OF FREEWAY TO CHAIN OF ROCKS BRIDGE

The 24.7 mile portion nearest St. Louis is in extremely poor condition. The pavement is 18 feet wide. It has been resurfaced with a bituminous material that has failed to withstand the loads it has to carry. It is badly rutted and has a surface that looks like a washboard. Added to the poor surface features are sharp curves, steep grades, narrow shoulders, dangerous intersections, and the cultural features of an area of fairly dense population. These, plus the fact that there are many dangerous railroad grade crossings in the area make this section one of the most obsolete portions of route 66 from Chicago to Los Angeles.

There is a total of 22.8 miles of poor rural roads in this portion of the highway - the only other type being 1.9 miles of city streets. The road passes through Edwardsville and two villages, where there are narrow city streets and much congestion. There are five important intersections on this road, marked by three stop signs and two caution lights. There are six railroad grade crossings and three railroad grade separations, one of which is in poor condition.

The Chain of Rocks bridge is not a marvelous engineering masterpiece. The roadway is only 20 feet wide and there is a sharp angle in the middle of the bridge where a car could easily miss the turn and run through the guard rail into the Mississippi River.

THE ALTERNATE SYSTEM

Route 66 in Illinois has an alternate route system that comprises 100 miles of highways. The roads of this system lead to the centers of Joliet, Bloomington, Springfield, East St. Louis, and several lesser towns.

Alternate 66 leaves the main road at a junction 16 miles southwest of Chicago and follows a course southward to Gardner where it rejoins the main route. This road is 43 miles long and passes through the city of Joliet and the towns of Elwood, Wilmington and Braidwood. There are 13 miles of four lane pavement and ten miles of dual lane pavement, all in excellent condition. However, the route passes through the heart of Joliet with its high degree of congestion. Furthermore, the superhighway ends abruptly at Elwood and the remaining 20 miles are in extremely poor condition. The concrete pavement of this portion of the road is 18 feet wide and is full of holes and ruts which have not been repaired because the highway has reached a stage where it cannot be adequately maintained.

A new road is needed immediately on this highway. It passes through many residential sections, has several stop signs, narrow bridges and grade separations and many blind curves. The southernmost 10 miles are parallel to route 66 and runs within 300 yards of that highway, separated from it by the Gulf, Mobile, and Ohio railroad tracks. In this segment, because of the proximity of the better road, alternate 66 is used only for local purposes.

"City 66" is a common marker on the highway and is used to denote roads leading to cities south of Gardner that the main road by-passes. Many of these roads are built of the original pavement on route 66 and are in poor condition in their rural portions. Inside the city limits, city 66 is often along congested streets. There are 21 miles of such roads between Gardner and Edwardsville.

Due to the poor condition of route 66 in Illinois at its southern end, many motorists leave this highway at Edwardsville, preferring to take Illinois 159 and U. S. 40, the latter a superhighway to East St. Louis and St. Louis. This road is in much better condition than route 66. Its length is 24 miles.

A third route to St. Louis is city 66 which leaves the main route at a junction four miles east of the Chain of Rocks Bridge and goes to St. Louis via East St. Louis. This road is 12 miles long and is in fair condition.

SUMMARY

The best feature of route 66 in Illinois is that, with the exception of Plainfield, the road by-passes every city and town between Chicago and Hamel, Illinois. In the 276.2 mile distance of route 66 from the Chicago city limits to the Chain of Rocks Bridge there are only nine traffic lights, eight stop signs and twelve caution lights. Sixteen cities and towns are by-passed by the route and in only four does the road enter the city limits.

There are ten highway grade separations and fourteen railroad grade separations on the route, but five of the latter are in poor condition. Most of the road crosses fairly level terrain and there are few dangerous grades or curves. All of the above tends to shorten the driving time from one metropolitan area to another and is especially useful for through traffic.

There are a total of 20 railroad grade crossings and 60 important intersections on the route which may cause motorists to slow down. On the 252 mile portion of the route that is denoted a freeway, only one by-pass, the Springfield belt line, is in poor condition.

Since 1945, 133.3 miles of new highway has been built on the freeway portion of the route. This route has had more new construction in recent years than any other primary highway in Illinois. The Division of Highways plans to add two more lanes to these new portions "at some future date," thus making most of it into a superhighway. It already contains 30.2 miles of superhighway that is in excellent condition. In addition, there are 62.4 miles of two lane highway which is in good or fair condition.

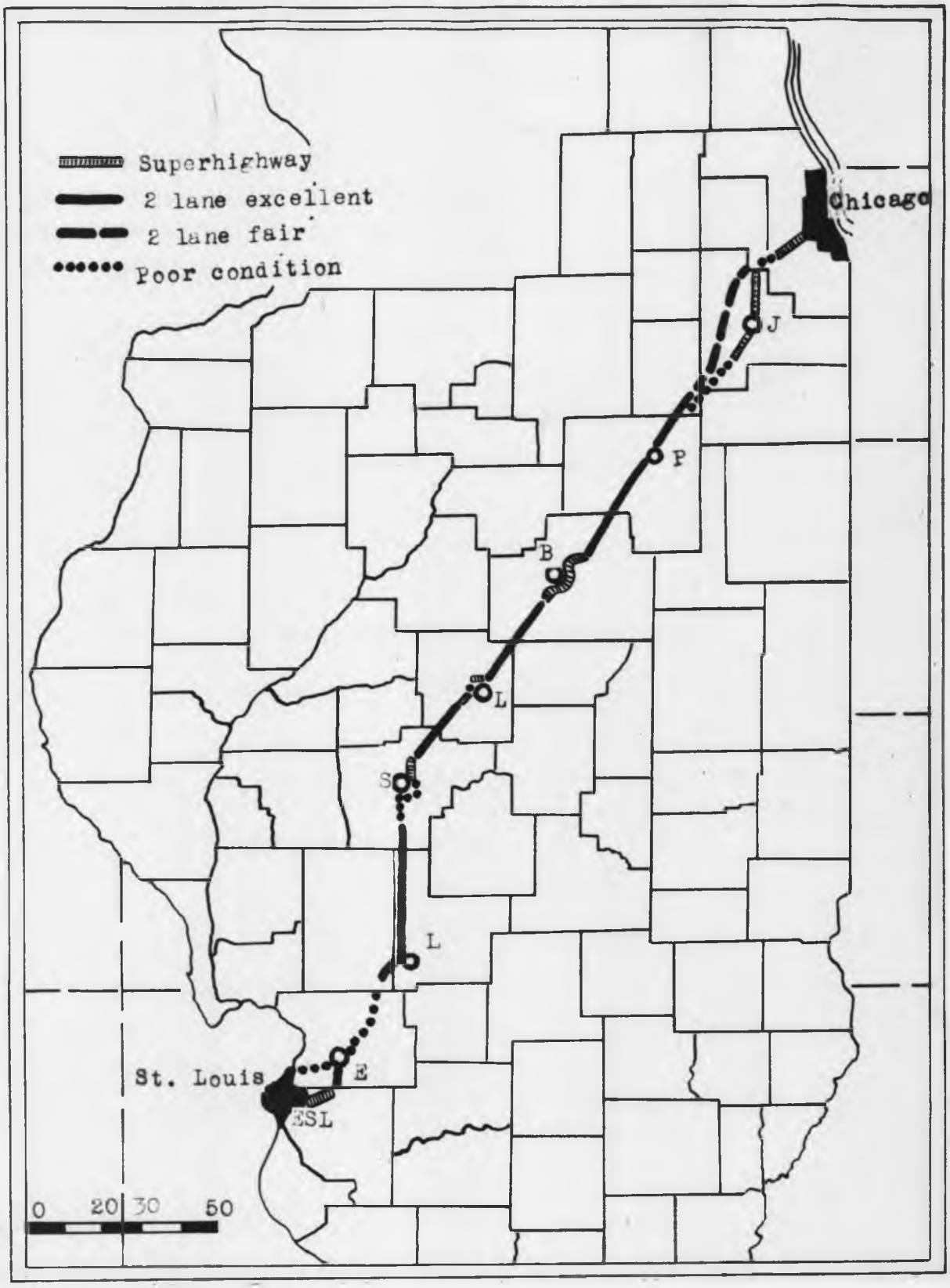
However, not all of route 66 in Illinois can be classed as fair or better. Six miles of superhighway are in poor conditions as are 18.2 miles of other highway on the freeway. All of the 24.7 miles from the end of the Freeway to the Chain of Rocks Bridge is in poor condition. All of the new construction has taken place on the middle portion while all portions in the St. Louis metropolitan district and parts in the Chicago area have been allowed to deteriorate.

The route 66 alternate system of highways in Illinois contains 100 miles of pavement 43 miles of which is superhighway. Because of the poor condition of route 66 in the St. Louis area, many motorists prefer the alternate system found there. With the exception of the superhighways, the

alternate system is made up of poor conditioned rural roads and crowded city streets.

Figure 11 is a map showing the condition of the route 66 system in Illinois.

Figure 11. Condition of route 66 in Illinois.



D. INTRASTATE IMPORTANCE OF THE ROUTE

1. POPULATION SERVICED

Route 66 in Illinois serves 7,500,000 persons.[2] Figures 12 and 13 shows the trend of population serviced by it as compared with the trend in population of the state of Illinois plus the populations of St. Louis City and St. Louis Count, Mo. This graph shows that route 66 services three-fourths of the total population of this area. One of the most important functions of the road is the servicing of these people in its capacity as the shortest highway link between the two cities, and the route is used by many persons who live in the metropolitan districts.

Of considerable political significance is the fact that Springfield, the state capitol is connected to Chicago, the largest city in Illinois by this route and one is tied politically with the other. The highway between these cities not only should be maintained in good condition from the economic viewpoint, but for public relation reasons as well. A good road creates good faith in the state government on the part of the people who are using the road.

Route 66 enters into the lives of the 600,000 persons living between the large metropolitan districts in a much more direct fashion than it does for

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[2] The Chicago Association of Commerce and Industry estimated the population of Chicago metropolitan district to be 5,400,000 in 1949. This organization defines the area as including Cook, Dupage, Kane, Lake and Will Counties in Illinois, and Lake County in Indiana. The St. Louis Chamber of Commerce estimated the population of the St. Louis metropolitan district to be 1,678,800 in 1949. It claimed St. Louis City and St. Louis County in Missouri, and Madison and St. Clair Counties in Illinois are within its area. Population for the hinterland was obtained from the estimations for population of counties and cities of over 10,000 by the Health Statistics Bulletin, Illinois Division of Vital Statistics and Records, Special Release Number two dated December 22, 1949.

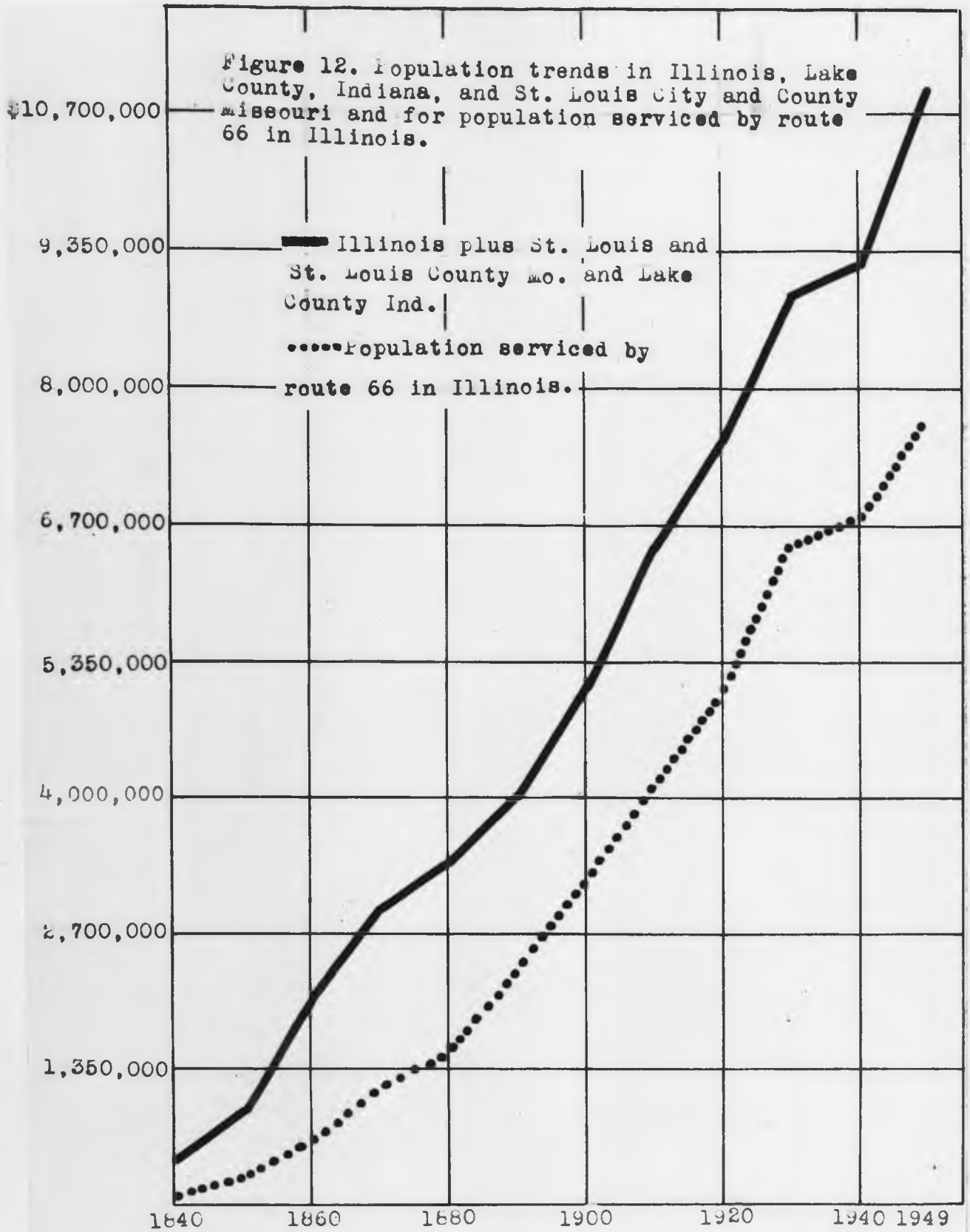



Figure 12. Population trends in Illinois, Lake County, Indiana, and St. Louis City and County Missouri and for population serviced by route 66 in Illinois.

Sources: U.S. Census Bureau, Chicago and St. Louis Chambers of Commerce and the Illinois Bureau of Vital Statistics and Records.

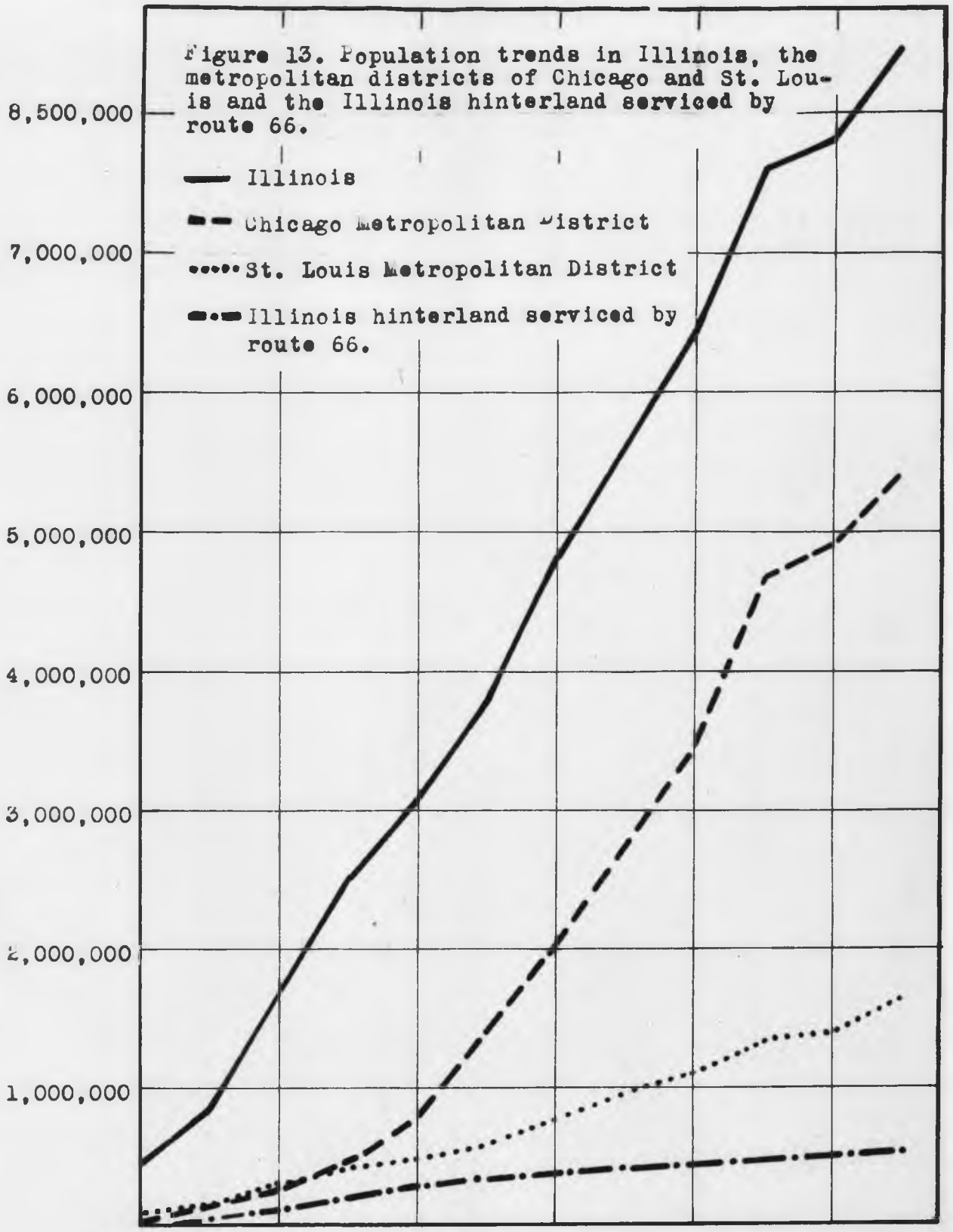



Figure 13. Population trends in Illinois, the metropolitan districts of Chicago and St. Louis and the Illinois hinterland serviced by route 66.

Sources: U.S. Census Bureau, Illinois Division of Vital Statistics and Records, Chicago Association of Commerce and Industry, and the St. Louis Chamber of Commerce.

the majority of persons living in Chicago and St. Louis. This hinterland itself produces much traffic and generates more traffic per capita than do the metropolitan districts. For many persons in this area, this highway leads to work, to markets, to stores, and to amusements.

Route 66 crosses nine Illinois counties and besides the large metropolitan areas, it serves the cities of Springfield, Bloomington, Lincoln, Decatur and Peoria. The latter two are not directly on it, but it is used by the citizens of these towns to a significant degree. A motorist or trucker from Peoria or Decatur going to either St. Louis or Chicago will presumably drive part of the distance on it.

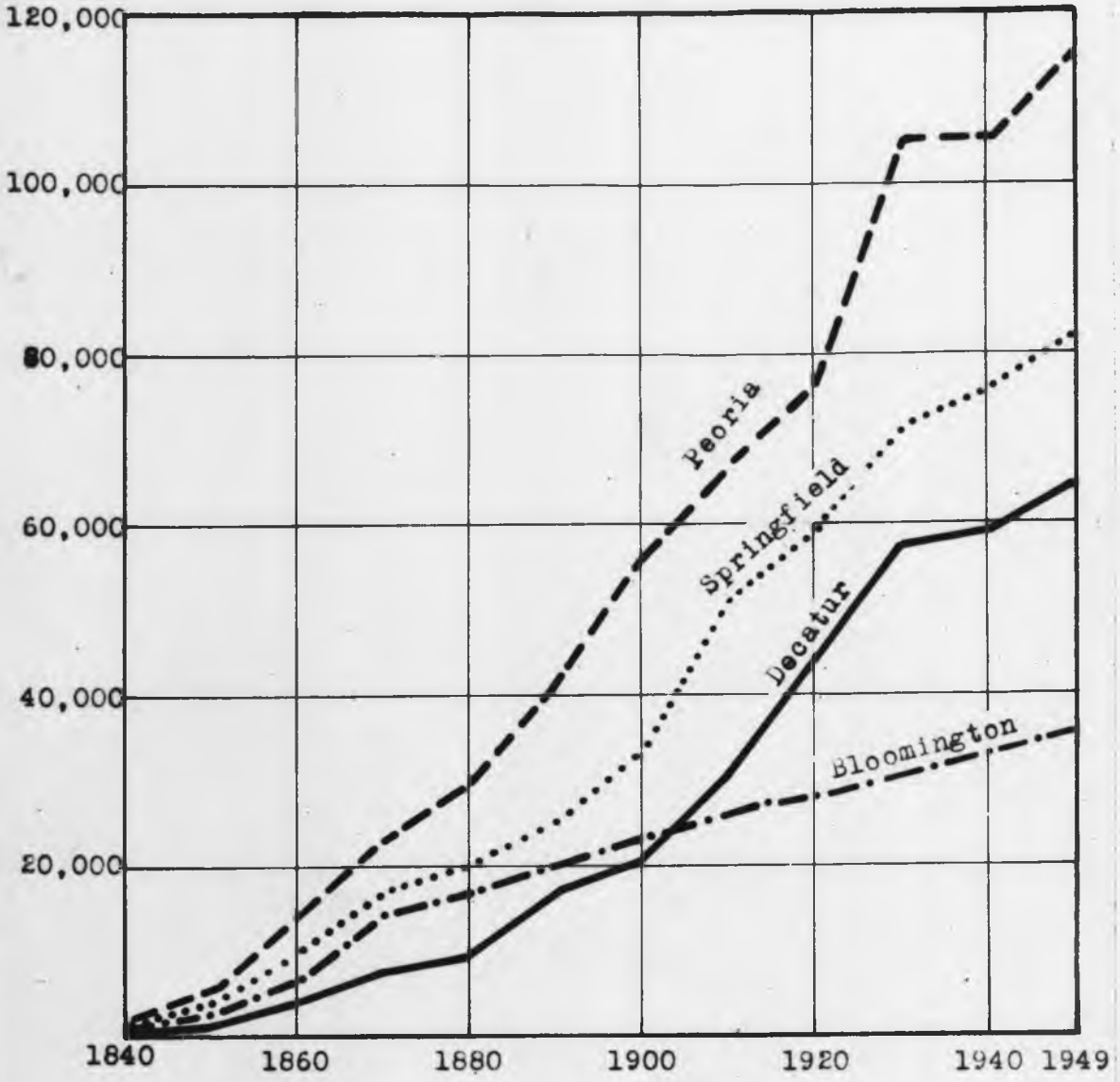
Figure 14 shows the population trends of these cities. All show a continuous rise in population and as they grow, their dependence on the main arteries of transportation, which includes this route, increases.

Route 66 passes near several cities and towns of less than 10,000 population. It serves Dwight and Pontiac and the important government institutions located near them. It serves the farming communities of Chenoa, Lexington, Atlanta, and Divernon and the larger marketing town of Litchfield. It serves the coal industries at Mt. Olive and Staunton near St. Louis and the same activities of Coal City and Braidwood near Chicago. In the St. Louis metropolitan district, it connects Edwardsville with St. Louis via the most direct route.

In addition to the urban communities mentioned above, Joliet, a satelite of Chicago is connected with that center via the alternate system.

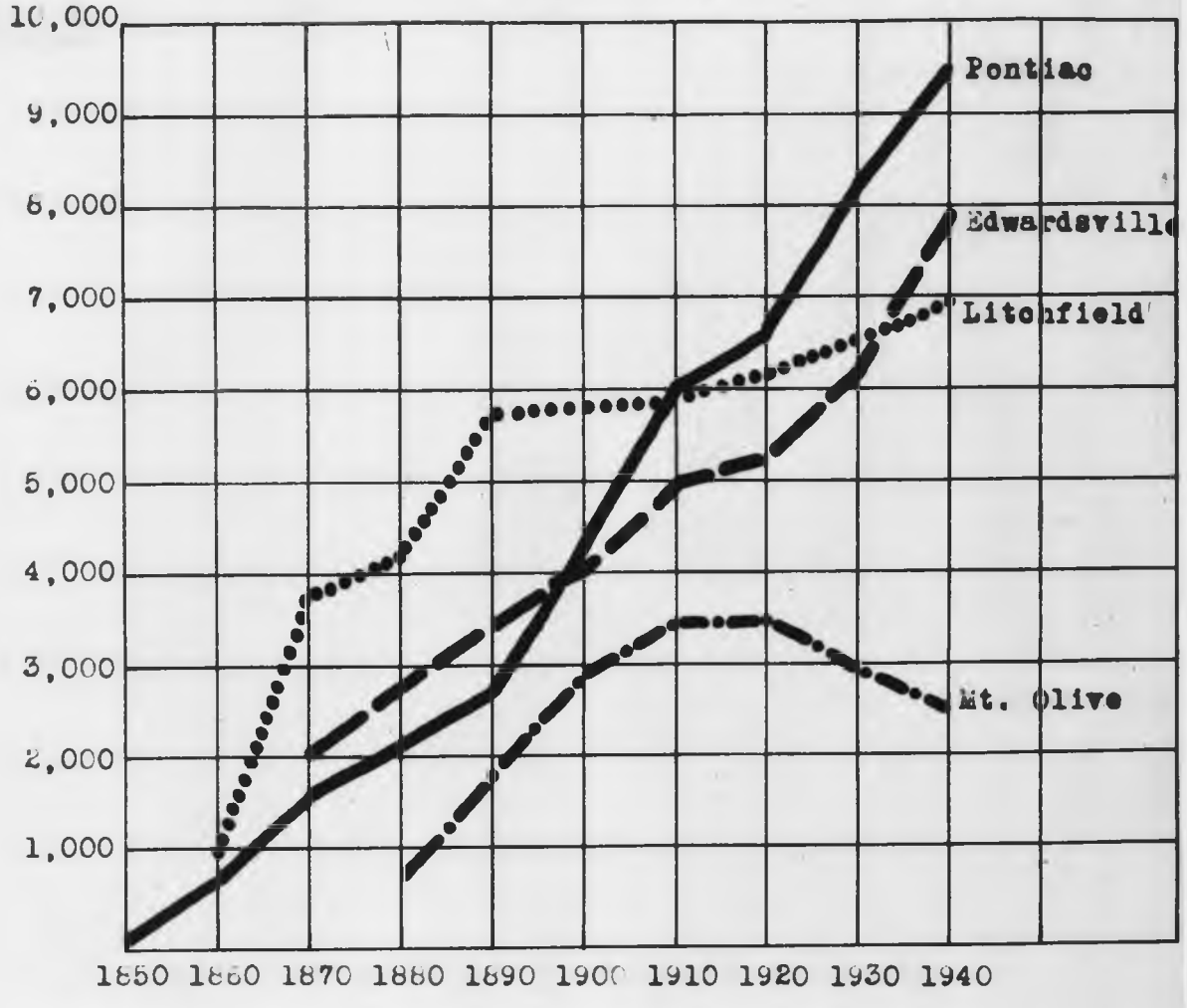
Figure 15 shows the population trends for several of the smaller cities. It is interesting to note that Mt. Olive has decreased in population since 1920 while all other towns have continued to increase at a slow rate. Mt. Olive is in Macoupin County which has decreased in population since 1920 because after many coal mines in the vacinity closed down its rural economy

Figure 14. Population trends in cities of Decatur, Bloomington, Springfield, and Peoria. 1840 0 1949.




Sources: U.S. Census Bureau and Illinois Division of Vital Statistics and Records.

Figure 15. Trends in population of smaller towns serviced by route 66 in Illinois. 1850 - 1940.




Source: U.S. Census Bureau.

could not support the population that was there. There is a possibility that some of these towns have decreased in population since 1941, but there are no estimates of their present population available.

Figures 16 and 17 show the population trends in the six Illinois counties not included in the large metropolitan districts, but which are served directly by route 66. These counties having cities of over 25,000 persons within their boarders have steadily increased in population while in the three rural counties it has leveled off or decreased since 1920. In Logan County, Lincoln, the principal city, has increased in population, while the county as a whole has decreased.

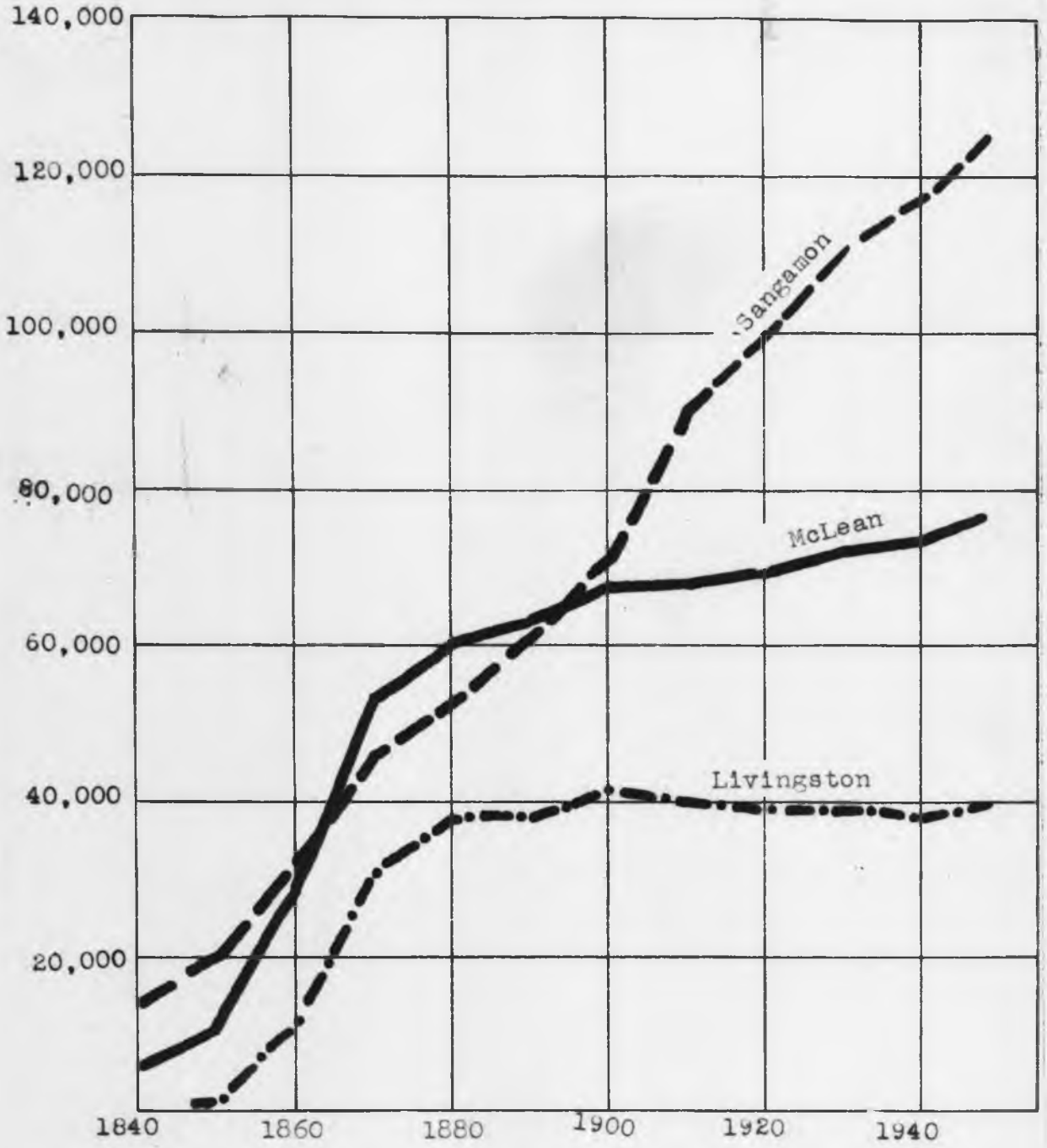
Route 66 is a vital transportation artery in these less densely populated counties and a large segment of traffic of a local nature is generated in the rural areas. Recently, the Bureau of Highway Research Division of Highways made a survey of the use of by-passes on route 66. It showed that only 58 per cent of the motorists by-pass such places as Mt. Olive, Lexington, and Chenoa, all under 5,000 population, and only 38 per cent of the total traffic by-passes such places as Litchfield and Pontiac, which have a population of less than 10,000. This study shows the importance that the road plays in the rural areas and indicates that much, and possibly most, of the traffic on the rural parts of route 66 is generated in the rural areas.

Table 1 gives the latest estimates of population for all counties and incorporated towns and cities which are serviced by route 66.

2. TRAFFIC VOLUME

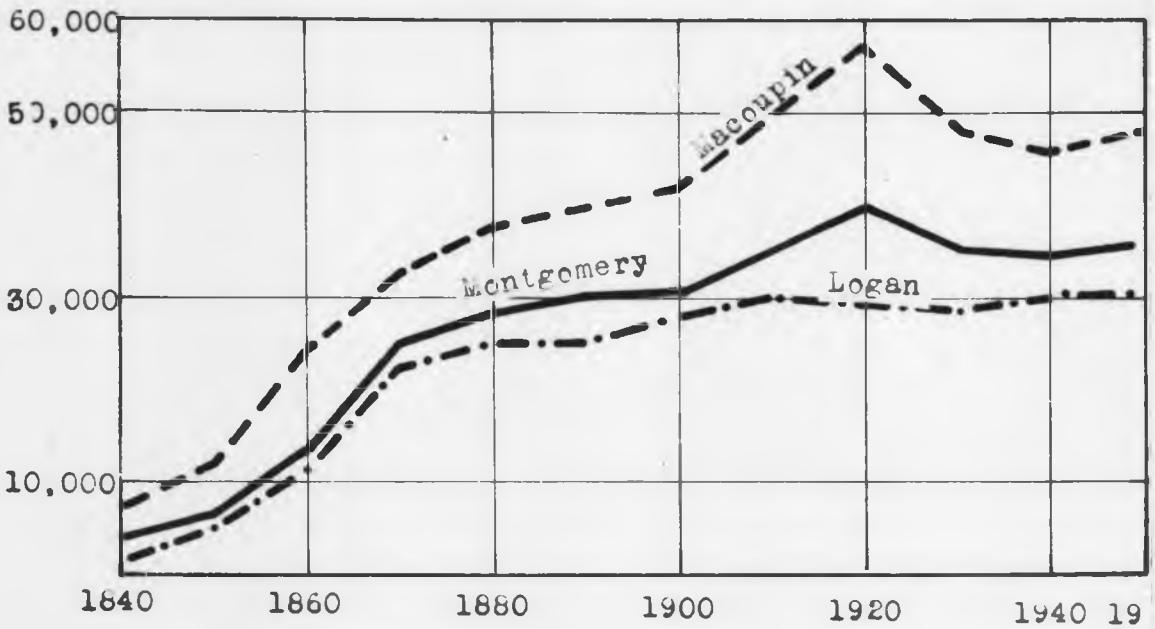
Route 66 is the most heavily traveled rural road in Illinois. According to the Chicago Motor Club, an average of 3,750 vehicles per day were using it. This does not mean that that number passes any given point or even that this much traffic could be found on most of the mileage of the route. The amount of traffic recorded at the 45 stations on the route system used

Figure 16. Population trends in McLean, Livingston and Sangamon Counties. 1840 - 1949




Source: U.S. Census Bureau and Illinois Division of Vital Statistics and Records.

Figure 17: Population trends in Montgomery, Macoupin, amd Logan Counties. 1840 - 1949.




Sources: U.S. Census Bureau and Illinois Division of Vital Statistics and Records.

TABLE I. POPULATION ON ROUTE 66.

| | 1940 | 1949 |
|---|---|---|
| CHICAGO METROPOLITAN DISTRICT | | 5,400,000 |
| COOK COUNTY | 4,072,459 | 4,405,078 |
| Chicago | 3,406,628 | 3,639,000 |
| WILL COUNTY | 115,208 | 121,849 |
| Joliet | 42,731 | 46,653 |
| Plainfield | 1,485 | ------ |
| Braidwood | 1,354 | ------ |
| GRUNDY COUNTY | 18,498 | 19,222 |
| Coal City | 1,852 | ------ |
| LIVINGSTON COUNTY | 38,637 | 39,974 |
| Dwight | 2,499 | ------ |
| Odell | 927 | ------ |
| Pontiac | 9,594 | ------ |
| MCLEAN COUNTY | 73,613 | 77,615 |
| Chenoa | 1,401 | ------ |
| Lexington | 1,284 | ------ |
| Towanda | 450 | ------ |
| Normal | 6,985 | ------ |
| Bloomington | 32,728 | 35,384 |
| LOGAN COUNTY | 29,307 | 30,447 |
| Atlanta | 1,290 | ------ |
| Lincoln | 12,696 | 13,718 |
| SANGAMON COUNTY | 118,146 | 125,570 |
| Springfield | 75,649 | 81,343 |
| Divernon | 1,053 | ------ |
| MONTGOMERY COUNTY | 34,086 | 35,489 |
| Farmersville | 586 | ------ |
| Raymond | 818 | ------ |
| Litchfield | 7,048 | ------ |
| MACOUPIN COUNTY | 45,990 | 48,025 |
| Bonld | 2,444 | ------ |
| Mt. Olive | 2,659 | ------ |
| Staunton | 4,212 | ------ |
| MADISON COUNTY | 151,953 | 164,147 |
| Livingston | 1,115 | ------ |
| Worden | 1,264 | ------ |
| Edwardsville | 8,008 | ------ |
| Hamoki | 2,701 | ------ |
| Granite City | 28,367 | 26,153 |
| Madison | 7,762 | ------ |
| Venice | 5,454 | ------ |

TABLE I. (Continued)

| | 1940 | 1949 |
|---|---|---|
| ST. CLAIR COUNTY | 168,496 | 184,152 |
| East St. Louis | 76,329 | 82,123 |
| ST. LOUIS CITY | 816,048 | 905,000 |
| ST. LOUIS METROPOLITAN AREA | 1,887,977 | 1,678,500 |
| Cities not directly on the route but affected by it - | | |
| PEORIA | 104,829 | 113,600 |
| DECATUR | 82,463 | 84,340 |

yearly by the Bureau of Highway Research, Division of Highways for traffic surveys, varies from a maximum of over 7,500 in portions of the Chicago metropolitan district to a minimum of 2,900 at one point between Springfield and the Raymond Interchange in the 1947 traffic volume survey, the latest one available. The amount of traffic varies according to the following factors:

1. Its proximity to metropolitan districts. On the route, more traffic is found near Chicago, St. Louis and Springfield than in any other areas.

2. The condition of the route itself. Traffic migrates to good roads and seeks out alternate routes when the road is in poor condition.

3. The quality and quantity of alternate routes. As a result of the poor condition of route 66 between the Raymond Interchange and Springfield in 1947, much traffic to and from the large metropolitan districts used an alternate route from Chicago to the Raymond Interchange. Despite the poor condition of the road between Hamel and Edwardsville, more traffic is found on that segment than in any other rural portion of route 66 because there are no alternate routes in this area.

The 16 mile road from Chicago to the junction of alternate 66 has the most traffic of any segment of route 66 in Illinois. This road funnels most of the traffic from route 66 and alternate 66, which leads to the satelite city of Joliet into and out of Chicago. The road has the potential capacity to hold this great volume because of its width. The traffic increase from 1941 to 1947 on this segment of the highway reflects the generally increased use of automobiles and trucks throughout the United States. This increase probably would have been still greater if the road had been in better condition.

The 45 miles "dog-leg" section of route 66 shows a slight decrease in traffic - possibly due to the deterioration and narrowness of the road.

Between 1941 and 1947, traffic on the 120 mile segment of the road between Gardner and Springfield has increased about 25 per cent. This increase is, in large measure, due to the rebuilding of the road which was formerly in poor condition.

TABLE 2. AVERAGE TRAFFIC BETWEEN SURVEY STATIONS 1941 AND 1947

| | Mileage | 1941 | 1947 |
|---|---|---|---|
| Chicago to junct. alt. 66 | 16 | 7,000 | 7,300 |
| Junct. alt. 66 to Gardner | 44 | 5,420 | 5,336 |
| Gardner to Chenoa | 29 | 5,000 | 5,766 |
| Chenoa to Bloomington | 24 | 5,000 | 5,650 |
| Bloomington to Lincoln | 32 | 5,160 | 5,400 |
| Lincoln to Springfield | 25 | 4,230 | 5,900 |
| Springfield by-pass | 9 | 2,323 | 5,080 |
| Springfield to Raymond | 5 | 5,110 | 4,130 |
| Raymond to Hamel | 23 | 4,520 | 4,360 |
| Hamel to Chain of Rocks Bridge | 22 | 5,650 | 4,176 |
| Alternate 66 | 43 | 4,300 | 4,100 |
| City 66 (East St. Louis) | 12 | 5,150 | 4,175 |
| Edwardsville-Collinsville-East St. Louis | 24 | 4,650 | 4,740 |

SOURCE: Computed from 1941 and 1947 traffic maps of Illinois, published by the Department of Public Works and Buildings, Division of Highways, Bureau of Highway Research.

The table shows a decline in use between Lincoln and Springfield. This does not give a true picture of the use by through traffic since most of the decline has been caused by the use of the road for local traffic in the vicinity of Springfield.

Despite the deterioration of the Springfield belt-line, 1947 traffic flow figures for this section show an increase over those of 1941. This increase is due to local traffic as the area is rapidly being transformed into a residential section.

Though there has been an increase in the use of the 32 mile segment of route 66 from Springfield to Raymond, the large figures given for both 1941 and 1947 traffic volume average is due to local use of the road around Springfield. Actually there is less traffic on large portions of this segment than on any other part of the route. This low volume is due to three factors. Until 1949, this road was in extremely poor condition. With the completion of the new road in this area, there will probably be a marked increase in traffic. For several years much traffic, especially commercial, between Chicago and St. Louis, has taken the alternate from Raymond to Chicago via Decatur and Kankakee in order to miss the bad conditions on route 66. The third reason for the small volume of traffic found here is it acts as a boundary line between the hinterlands of Chicago and St. Louis. Springfield is bound to Chicago by political ties. The region south from Raymond is bound to St. Louis due to its proximity to that city.

Although the 1947 figures show a slight decrease in the daily traffic between Raymond and Hamel, the average on this 32 miles portion is greater than that for any other rural portion of route 66 in Illinois. The reason for this is the lack of alternate routes. Unless wide detours are made, all traffic bound for St. Louis from Chicago or Springfield must use this portion. The decrease here is probably due to a decline in the amount of

local traffic.

Traffic is increasing on the portion from Hamel to the Chain of Rocks Bridge, a distance of 22 miles, despite the poor condition of the road. Much of this traffic is of a local nature and the rest is made up of motorists who prefer poor conditions on rural highways to the congestion found on city streets, even though the latter are in better condition. Most motorists seem to prefer the better road despite the traffic and use an alternate route from Edwardsville to St. Louis (Illinois route 158 and U. S. route 40) via Collinsville and East St. Louis. There is a larger average traffic volume on this 24 mile route than there is on route 66 from Edwardsville to the Chain of Rocks Bridge.

The second alternate route in the St. Louis metropolitan district in Illinois is city 66, which carries approximately the same average daily volume as does the main route. Its use, however, has decreased since 1941, probably because of congestion.

In the Chicago metropolitan district, the 43 miles, known as alternate 66 connects Joliet with points on the main thoroughfare north and south of that city. From Joliet north, alternate 66 acts as an arterial link between that city and Chicago. This highway is in good condition and carries over 5,000 vehicles per day. Parts of the route south of Joliet to Braidwood are in excellent shape. This portion carries an average of 4,000 cars per day. From Braidwood to the intersection with the main road at Gardner alternate 66 is very poor, and is used mostly for local purposes since it is separated from the main route only by the right-of-way of the Gulf, Mobile and Ohio Railroad. Less than 1,500 vehicles per day use this road.

Good long distance alternate routes lead from Chicago to Springfield and to Raymond and share some of the total highway traffic between Chicago and these two places. Many persons preferred to use U. S. 54 from Chicago to

Springfield before large portions of route 66 were rebuilt. Some going between Chicago and St. Louis still prefer to take 54 to Farmer City and then Illinois 48 to Raymond via Decatur and Taylorville. This route is of special significance to truckers who have their terminals on the south side of Chicago. These alternate routes are in good condition, but nevertheless are declining in importance.

between local points and not for through passengers between Chicago and St. Louis.

The trips via route 66 are used for through traffic between Chicago and St. Louis, though this line too, carries much traffic of a more local nature. The three night trips each way make the distance between the two centers in the fastest time - eight hours, 35 minutes from Chicago to St. Louis, and ten minutes shorter in the reverse direction. Daytime trips from Chicago to St. Louis take from nine hours to nine hours and 35 minutes while from St. Louis to Chicago, the trips take from eight hours 50 minutes to nine hours ten minutes. This bus route follows in part, alternate 66 through Joliet in the Chicago metropolitan district, and Illinois 159 and U. S. 40 to Collinsville and East St. Louis in the St. Louis metropolitan district, both being in the route 66 network. The fare on the Central Greyhound Bus between Chicago and St. Louis is $6.69.

## B. COMMERCIAL IMPORTANCE OF THE ROUTE

### 1. COMPARISON OF DIFFERENT MODES OF PASSENGER TRANSPORTATION BETWEEN CHICAGO AND ST. LOUIS

Three types of passenger transportation agencies operate service between Chicago and St. Louis. The Central Greyhound Bus Company runs twelve scheduled trips daily each way between the cities. Transportation by bus is the least expensive, but the slowest means of travel between the cities. Six buses travel via route 66 daily in each direction and serve the cities and towns of Joliet, Pontiac, Springfield, Litchfield, and Collinsville. Six daily trips between the cities in each direction follow the more round-about route of U. S. 54, 45, and 40, and serve Kankakee, Champaign-Urbana, Mattoon, Effingham, and Collinsville. This latter is 316 miles long as compared with the 297 mile length of route 66 and on the average, it takes 45 minutes longer to complete the trip. The movements on this route are primarily for the use of traffic

The bus line serves only a small per cent of the total through passenger traffic between Chicago and St. Louis, but serves a much higher percentage of that traffic bound to and from the smaller towns and villages along the route, especially those that are not serviced by railroad passenger service. While it should not be discounted entirely for its service to through traffic between the two cities, the bus line is used much more extensively for travel on a more local level.

Three railroads have passenger service between Chicago and St. Louis. Although their routes are of different lengths, they all make the same time and charge the same fare between the two cities, due to a schedule agreement among themselves. Passenger service between the two cities is served by the Illinois Central System, the Wabash Railroad and the Gulf, Mobile, and Ohio Road, known as the Alton Route. The fastest trains on all lines make the trip in five hours, ten minutes, and one way coach fares are $8.66. The railroads service a large per cent of travelers by public conveyances between Chicago and St. Louis, and competition between the three railroads for this trade has made it necessary for each one to offer the best possible service and equipment on the runs between the two cities. One or more of these railroads also service much of the passenger traffic to and from Springfield, Bloomington, and Joliet.

Air passenger service is becoming a great rival of the railroads for service between the two metropolitan districts. The fastest flights make the 261 miles in one hour, 26 minutes. Since the airports are located far from the business sections of the cities, however, the passenger may have to spend from one to two hours in getting to and from the airports, a process which usually takes more time than to get to and from rail and bus terminals. Thus the saving in time by air travel is not so large, though still considerable. The standard one way fare from Chicago to St. Louis is $15.55 by air which is slightly cheaper than the fare for first class pullman service between

the cities.[3]

Air traffic, however, services only Chicago, Springfield, and St. Louis and all other points still must depend on road or rail. Air carriage between Chicago and St. Louis has had insignificant effects on bus transportation on route 66 because much of the latter is of local nature, also, air traffic cannot compete in price.

Figures on the exact number of passengers carried by the various transportation agencies between the two cities are not available, but railroads still carry the bulk of this traffic by a large margin. Nevertheless, air line continue to increase in popularity, partly at the expense of railroads. Private automobile travel has, of course, taken a tremendous volume of traffic away from the railroads also. Aircraft probably carry the second largest volume of passengers between the cities and buses the least of all. This is probably true since more air flights than bus runs are made daily between Chicago and St. Louis, and much of the passenger traffic on the buses does not go the entire distance.

The following table shows the relation between time consumed and fares of the different transportation agencies servicing St. Louis and Chicago:

TABLE 8

| | Agency | Time | Fare |
|---|---|---|---|
| By Air | Chicago and Southern | 1:26 | $15.55 |
| By Train | Illinois Central | 5:10 | 8.58 |
| By Bus | Central Greyhound | 8:35(southbound) | 5.69 |
| | | 8:25(northbound) | 5.69 |

[3] A lower birth on the Illinois Central trains costs $15.77.

## 8. COMPARISON OF DIFFERENT MODES OF FREIGHT TRANSPORTATION BETWEEN CHICAGO AND ST. LOUIS

A shipper can use any of four modes of transportation to send his freight between St. Louis and Chicago. The cheapest, but slowest method is via barges on the Illinois waterways. This serves a useful purpose in carrying such bulky goods as grain, lumber, petroleum and coal. In recent years, increased use has been made of this waterway for such items. Because of the slowness, the cost of transhipment that is often necessary, the inability of large barges to get all the way to Chicago, the climatic conditions which may close the canal at certain periods of the year and special rail rates on certain commodities which makes shipment by rail easier and almost as cheap, most shippers prefer to not use the boats. The competition thus offered to highway motor freight carriers is negligible. However, the waterway does serve as a potential threat and helps keep the rates charged by other agencies low.

Air freight between Chicago and St. Louis is relatively insignificant when compared with those handled by the other agencies, because of the high tariffs charged and the limited capacity. Only a certain few items of high unit value can be successfully shipped by air. These include such things as sea food, flowers, fresh berries and a few other items for which speed is all-important either because they are perishable or because they are needed as soon as possible.

Four railroads, the Wabash, Illinois Central, the Gulf, Mobile, and Ohio and the Chicago and Eastern Illinois, offer direct freight service between Chicago and St. Louis. The railroads, of course, carry all types of commodities, some of the greatest tonnage being grain, flour, coal, lumber, livestock, iron and steel, automobiles, cold storage fruits, vegetables and meats, and an infinite variety of manufactured goods.

Except for the Illinois waterways, the railroad is the only mode of transportation equipped to handle bulky commodities cheaply and efficiently. There are several special rates on bulky material such as coal, lumber, iron

and steel, grain and livestock shipped by car-lots which make carriage of these material very cheap in comparison with motor carrier and general rail rates. Unlike the passenger traffic, rail freight services all towns and villages and much of it originate or is re-destined for the hinterland. This freight service by the railroads is as fully important as the through freight service between Chicago and St. Louis and a few of the larger cities between. Highway motor carrier is second in importance only to rail freight and the loss to the railroads is becoming more important each year. For many goods, highway transport offers faster and more economical services than do the rails. Practically all dairy products, many frozen foods and refrigerated meats, half of all new automobiles, most market produce, and many manufactured products are now shipped by motor carrier. Besides their use for through traffic between the metropolitan districts, trucks are invading areas between Chicago and St. Louis at a sharply increasing rate. For local distribution of many types of goods like food and gasoline, the truck has become the most important transportation agent. Today farmers carry their grain further by truck to storage points for future rail shipment. The same carriers have almost put milk trains out of business in some localities, and now carry over half the state's livestock to the destined packing houses at Chicago, East St. Louis or other towns. Thus, truck service is important as a means of transportation for both local hauls and through freight.

The following table shows the rates and index percentages of transportation by air, rail and highway for general freight between Chicago and St. Louis:

TABLE 4

| | Miles | Rate | Index |
|---|---|---|---|
| 1. Motor Carriers | 295 | 147 | 100.0 |
| 2. Rail | 278 | 161 | 109.5 |
| 3. Parcel Post | (zone 2) | 220 | 149.7 |
| 4. Rail Express | 278 | 369 | 251.0 |
| 5. Air Freight | 251 | 355 | 241.5 |
| 6. Air Express | 251 | 921 | 626.5 |

For comparative purposes, rates are in cents per hundred pounds and motor rates are assigned an index of 100.0. It must be remembered that these rates do not include the many special commodity rates offered by the railroads on certain items. The rail rates include the general increase of April, 1948 in Exparte 166. The table reflects the situation as of June 30, 1948, and it must not be assumed that they are permanent. The motor carrier rates are generalized and some subsequent adjustments by these carriers may have occurred in individual cases.

The rates do not reflect the differences in mileage of the transportation agencies. The choice of transport seems to be determined by the nature of the goods and the time it takes. According to the Automobile Manufacturers Association, a recent survey[4] showed that shippers use trucks primarily because of the time saved, and secondly, because it costs less. Quickest shipping time is by air express, but due to the mobility of trucks and the necessity of transshipping goods from air freight and in some cases from rail express-motor carriers in most instances-are the second fastest means of transportation. St. Louis is within the 350 mile range of Chicago that represents the ten hour work-day limit for truck drivers.

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[4] "Motor Truck Facts", 1949 edition published by the Automobile Manufacturers Association. p. 26.

Thus, motor freight between St. Louis and Chicago is easily carried from warehouse to warehouse in one day if shipped via 66 or alternate highway systems. Parcel Post normally takes at least a day and a half and regular rail freight may take a week or longer.

5. MOTOR FREIGHT TRAFFIC ON ROUTE 66

Route 66 carries the bulk of motor freight traffic between Chicago and St. Louis and commercial vehicles account for approximately one-fourth of the total on this road. One-sixth of the entire amount is composed of tractors and semi-trailers or heavy single unit vans.

The mean average volume of daily commercial traffic on the highway in 1947 was 940 vehicles, or which 550 to 600 were classified as heavy trucks. Like automobile movement, commercial traffic varies from station to station, but the variation is not so great as that of passenger cars. Usually where the automobile traffic is low in volume, there is a slight drop in commercial vehicles, but the percentage of trucks to the total volume increases. Average commercial traffic volume between stations on route 66 in 1947 is given in the following table, on page 65.

Most commercial traffic on the route is found in the vicinity of the large cities and reflects local transportation. Due to the lack of alternate routes between Raymond and Edwardsville, its greatest commercial traffic is found on this rural portion. The route from Chicago to Raymond via Kankakee and Decatur carries approximately one-third of the amount of commercial traffic that is carried by route 66, and constitutes an important secondary truck route between the metropolitan districts. Trucks use the alternate system in the vicinity of St. Louis more than the main road, because many terminals are located in East St. Louis, and the main road is in poor condition. While truck traffic thins out in the more rural portions, most of the trucks found on these roads are long distance haulers, and are tractor-trailers or large vans.

TABLE 8. AVERAGE COMMERCIAL TRAFFIC VOLUME BETWEEN SURVEY STATIONS--1947

| | Miles | Commercial Traffic Volume | % of Total Traffic Volume |
|---|---|---|---|
| Chicago to junction alternate 66 | 18 | 1,720 | 23 |
| Junction alternate 66 to Gardner | 44 | 960 | 28 |
| Gardner to Dwight | 9 | 990 | 23 |
| Dwight to Pontiac | 10 | 960 | 26 |
| Pontiac to Chenoa | 10 | 840 | 23 |
| Chenoa to Bloomington | 24 | 920 | 24 |
| Bloomington to Lincoln | 32 | 960 | 27 |
| Lincoln to Springfield | 29 | 850 | 21 |
| Springfield By-pass | 9 | 775 | 25 |
| Springfield to Divernon | 12 | 1,050 | 25 |
| Divernon to Raymond | 19 | 870 | 30 |
| Raymond to Hamel | 23 | 1,290 | 27 |
| Hamel to Edwardsville | 9 | 1,360 | 31 |
| Edwardsville to Chain of Rocks Bridge | 15 | 860 | 20 |
| Edwardsville to Collinsville to East St. Louis | 24 | 1,090 | 23 |

SOURCE: Bureau of Highway Research, Division of Highways.

SUMMARY

Route 66 is the most important rural route in Illinois. It is the eastern link of a famous transcontinental highway and as a whole, is in better condition than any other part of the road except for the highway in California. The Illinois part of the route has been extensively rebuilt since 1945, but some mileage in this state is still substandard.

Route 66 in Illinois serves 7,500,000 persons. It is the backbone route of the state, and is the shortest and best road between Chicago, the state capitol, and St. Louis. In servicing two large metropolitan districts, two additional moderately large cities and the rich agricultural hinterland area, this highway carries more commercial and automobile traffic than any other rural road in the state. It is of considerable importance as a commercial artery, and one-fourth of all its traffic is composed of trucks. For all these reasons, it is the most important rural route in the state but only a very limited amount of its mileage can be classed as superhighway.

## CHAPTER XII

## POSSIBILITIES OF A SUPERHIGHWAY FROM CHICAGO TO EAST ST. LOUIS

Within the last decade there has been serious deliberation in the Illinois General Assembly on building a toll road superhighway from Chicago to East St. Louis, undoubtedly spurred by the phenominal success of the Pennsylvania Turnpike. Thus, the Illinois State Superhighway Commission[1] was created by the 63rd General Assembly on July 9, 1945. The act established a five member commission with authority to acquire land, build, and operate superhighways which were durable multiple lane highways so designed and constructed as to eliminate intersections at grade with any public thoroughfare or railroad except at points of access to such multiple lane highways together with grade operations, and to limit access rights of traffic

from abutting property. The Commission was to be able to charge tolls for use of the superhighways, and issue bonds maturing in not more than twenty years, to help finance them. Interest and amortization of bonds was to be met only with toll revenues - not being an obligation of the state. The Commission was to be able to accept assistance from other sources of financing for building the superhighway, such as federal aid, and could obtain revenue from concessions granted to private agencies. After the bond obligations were met, the superhighways were to become free of tolls and a part of the system of primary highways of the state of Illinois.

The Superhighway Commission immediately suggested that three rural routes in Illinois should be considered as possible superhighways. These routes were:

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[1] Illinois revised statutes, Chapter 121 - 314A and 314A25.

1. Chicago to East St. Louis, closely parallel to route 66.

2. Chicago to Rockford, closely parallel to route 20.

3. East St. Louis to the Indiana state line near Terre Haute, closely parallel to route 40.

For further study of the possibility of successfully building such routes, the Commission contracted with the firm of Allied Engineers Incorporated of Detroit, Michigan to make a detailed study of them.[2] This organization based its report on a survey of the distances traveled by traffic on the present routes, adequacy of those routes, the degree of congestion found on them, the type of traffic using them, and the percentage of traffic using the free routes who would be willing to use the superhighways at a rate of three cents per mile per commercial vehicle and one half cent per mile per passenger car. The firm also predicted the costs of building such highways and came to the following conclusions:

1. No toll road in Illinois would pay for itself in twenty years, and the law would have to be changed to make a thirty year bonding period possible.

2. Only 11.8 per cent of the costs of the north cross state route (Chicago to Rockford) and the south cross state route (East St. Louis to Terre Haute) would be paid by tolls in a thirty year bonding period.

3. Only 36.6 per cent of the Chicago to East St. Louis route could be paid in a thirty year bonding period.

The author believes the findings of this report are conservative, and as a result are pessimistic. Existing turnpike authorities charge a toll up to twice the amount proposed by the Allied Engineers, and find that the majority of users believe the toll roads are worth the price. Secondly, Allied Engineers believe only 60 per cent of users of free roads will be willing to pay even their

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[2] "Toll Superhighways for Illinois", A Report to the Illinois State Superhighway Commission, by Allied Engineers Inc., Detroit, Michigan. December 1944.

rates in order to use the superhighway. This is far too conservative in the light of recent surveys on the users of present toll systems. It has been found that contrary to driving possible users away by tolls, the presence of the superhighway draws traffic to it despite the tolls. Certainly such a road from Chicago to East St. Louis would be the best road between the cities in every respect and as such would draw at least 70 per cent of the traffic between the points despite the tolls.

Allied Engineers did not predict correctly the increase in vehicle mileage which would take place after World War II. Total vehicular mileage in Illinois has doubled since 1940 and is expected to double again by 1970[5]. Optimistic predictions of the future traffic volume on the Chicago to East St. Louis route at a charge of one cent per mile per passenger car and from three to six cents per mile per commercial vehicle, depending on its weight, show that such a route, even at postwar prices of material and labor and without considering outside financial help from special state appropriations or from federal aid, and without considering revenue from concessions, could be paid for easily within a thirty year bonding period. See Tables 6 and 7.

Traffic counts on route 66 were used for both the Allied Engineers and Pennsylvania Turnpike methods of computing the revenue from a toll road between these cities. The Allied Engineers' count was taken in 1940, but the count for the second method was taken in 1947, and is much higher, having already increased more than the Allied Engineers predicted it would in a ten year period. Only 60 per cent of the possible traffic for a superhighway was used in the Allied Engineers method of computation while 70 per cent of present free highway traffic was used in the second method, which also assumes that the presence of the superhighway would draw traffic from alternate routes other than route 66. No such assumption was made by Allied Engineers.

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[5] "A Highway Improvement Program for Illinois," Griffenhagen and Associates. 1948. p. 57.

TABLE 6. PENNSYLVANIA TURNPIKE METHOD USED TO COMPUTE TRAFFIC VOLUME ON A TOLL ROAD FROM CHICAGO TO EAST ST. LOUIS

| | Miles | Daily Traffic | Annual Traffic | Annual Toll Traf. | Annual Commercial Traf. |
|---|---|---|---|---|---|
| Chicago to Elwood | 34 | 7,000 | 2,555,000 | 1,788,500 | 450,000 |
| Elwood to Chenoa | 60 | 3,765 | 1,317,750 | 790,650 | 367,500 |
| Chenoa to Lincoln | 50 | 3,480 | 1,218,000 | 730,800 | 306,250 |
| Lincoln to Springfield | 30 | 3,450 | 1,207,500 | 724,500 | 301,000 |
| Springfield to Raymond | 35 | 3,700 | 1,295,000 | 777,000 | 336,000 |
| Raymond to E. St. Louis | 65 | 4,460 | 1,561,000 | 936,600 | 416,500 |
| | 279 | | | | |
| "Stolen Traffic" | 178 | 2,100 | 735,000 | 154,350 | 227,500 |

| | Annual Commercial Toll Traffic | Annual Car Toll Traffic | Passenger Vehicle Miles |
|---|---|---|---|
| Chicago to Elwood | 300,000 | 1,508,500 | 41,289,000 |
| Elwood to Chenoa | 257,250 | 665,175 | 39,910,500 |
| Chenoa to Lincoln | 214,575 | 638,225 | 31,911,250 |
| Lincoln to Springfield | 210,700 | 654,550 | 19,036,500 |
| Springfield to Raymond | 255,200 | 671,300 | 23,495,500 |
| Raymond to E. St. Louis | 291,550 | 801,150 | 52,074,750 |
| "Stolen Traffic" | 47,775 | 107,775 | 18,860,625 |
| Total | 1,256,850 | 5,026,675 | 226,578,125 |

| | Commercial Vehicle Miles | Revenue from Passenger Vehicles | Revenue from Commercial Vehicles |
|---|---|---|---|
| Chicago to Elwood | 10,200,000 | $ 412,890 | $ 408,000 |
| Elwood to Chenoa | 15,435,000 | 399,105 | 617,400 |
| Chenoa to Lincoln | 14,718,250 | 319,112 | 588,728 |
| Lincoln to Springfield | 6,321,000 | 190,365 | 252,840 |
| Springfield to Raymond | 8,132,000 | 234,955 | 325,280 |
| Raymond to E. St. Louis | 19,150,250 | 520,747 | 966,008 |
| "Stolen Traffic" | 3,493,125 | 188,606 | 137,324 |
| Total | 79,449,125 | $2,255,780 | $3,395,580 |

| | Annual Total Revenue from the Toll Road |
|---|---|
| Chicago to Elwood | $ 820,890 |
| Elwood to Chenoa | 1,116,505 |
| Chenoa to Lincoln | 907,840 |
| Lincoln to Springfield | 443,205 |
| Springfield to Raymond | 560,235 |
| Raymond to E. St. Louis | 1,486,755 |
| "Stolen Traffic" | 325,935 |
| Total | $5,661,365 |

TABLE 6. (Continued)

| | |
|---|---|
| 226,678,125 car miles at one cent per mile | $ 2,266,780 |
| 79,440,125 truck miles at four cents per mile (average) | 3,395,580 |
| Total Income first year | $ 5,661,360 |
| Annual Income after 10 years (traffic volume doubled) | $ 11,112,520 |
| Total Income over 30 year period | $279,112,560 |
| Right of way costs (estimations) | 9,680,000 |
| Construction costs (estimations) | 161,720,000 |
| Preliminary planning costs (1% Construction costs) | 1,600,000 |
| Construction Planning (3% Construction costs) | 4,540,000 |
| Financing and Legal | 500,000 |
| Three years bond interest (3% per year) | 5,660,936 |
| Total Costs | $189,781,000 |
| Annual revenue first 10 years | $ 5,661,360 |
| Operation and maintenance first 10 years | 1,000,000 |
| Net yearly revenue first 10 years | $ 4,661,360 |
| Total Bond capitalization first 10 years | $ 46,613,600 |
| Annual revenue after 10 years | $ 11,122,560 |
| Operation and maintenance after 10 years | 1,500,000 |
| Net yearly revenue after 10 years | $ 9,622,560 |
| Total capitalization in 30 years | $249,064,800 |
| Percent bond capitalization in 30 years | 131% |

METHOD OF COMPUTATION:

These rates are computed at one cent per mile per passenger car and from three to six cents per mile per commercial vehicle, depending on its weight. The latter averages about four cents per mile. Traffic was computed at 70 per cent of the users of present free highways who would be willing to pay tolls. "Stolen Traffic" is computed at 50 per cent of the users of alternate roads who would use the toll road. For annual computation, a basis of 342 days was used. 1947 figures, derived from the 1947 traffic flow map published by the Bureau of Highway Research, Illinois Division of Highways, were used for the computations. This method has been used successfully by the Pennsylvania Turnpike Commission.

SOURCE: Highway Economics, by H. Tucker and M. C. Leager, International Textbook Co., Scranton, Pennsylvania. 1942. p. 135.

TABLE 7. COMPARISON OF ALLIED ENGINEERS METHOD OF COMPUTATION OF COST CAPITALIZATION WITH PENNSYLVANIA TURNPIKE METHOD

| | Allied Eng. 1941 | Penn. Turn. 1947 |
|---|---|---|
| Length in miles | 269 | 269 |
| Right of way cost | $ 4,840,000 | $ 9,680,000 |
| Construction Cost | 75,860,000 | 151,720,000 |
| Preliminary Plans Cost | 800,000 | 1,600,000 |
| Construction Plans Cost (3% of Construction Cost) | 2,275,800 | 4,541,600 |
| Construction Supervision Cost (4% of Construction Cost) | 3,034,400 | 6,066,800 |
| Financing and Legal Cost | 250,000 | 500,000 |
| 3 Years Bond Interest at 3% | 2,970,000 | 5,669,936 |
| Total Cost | 90,030,200 | 189,781,000 |
| Annual Revenue after 10 Years | 3,072,274 | 11,122,560 |
| Annual Operation and Maintenance Costs | 710,800 | 1,360,000 |
| Net Annual Revenue | 2,361,474 | 8,302,160 |
| Bond Capitalisation | 33,000,000 | 249,064,800 |
| Percentage of Total Cost Capitalized by Tolls | 36.6% | 131% |

SOURCE: "Toll Superhighways for Illinois", Allied Engineers Inc., Detroit Michigan, 1944. p. 17.

Finally, a different toll was to be charged by the second method, because it is believed that one cent per mile per car and four cents per mile (average) per commercial vehicle is a fair toll. Revenues from concessions were not predicted in either method, but neither was the yearly interest computed after the first three years. Construction figures are approximations. Allied Engineers used 1941 index prices, the Pennsylvania Turnpike method doubles them.

Justification for using the Pennsylvania Turnpike method of computation is found in recent surveys taken on traffic use of the present toll road systems in the United States. These surveys show that not 70 per cent, but 90 per cent of all possible users of toll roads are willing to pay fees to use them. The difference in the type of terrain found between Harrisburg and Pittsburg and Chicago and East St. Louis are very different, and it has been thought, because of this difference, a toll road in Illinois should not be compared with the Pennsylvania Turnpike. It is now believed however, that congestion and traffic hazards found on ordinary highways are just as real a barrier as mountains or rivers. Thus Pennsylvania is completing the Philadelphia Extension of the turnpike across the rolling piedmont and New Jersey is building a toll road across the coastal plain which will compete for traffic with two present four lane highways. The latter highway is costing $20,000 a day interest, yet the New Jersey Highway Department is sure it will be successful. Thus the physiographic advantage of having the only good route through the mountains is certainly not the only reason for the success of the turnpike, and if the mountains were a plains area, it would still probably be a success.

The condition of alternate route would play an important role in determining the success or failure of a toll road from Chicago to St. Louis. The free roads should be maintained in minimum condition, but should not be in such good shape as to offer the toll road a great deal of competition. Once

the remaining sub-standard mileage of present day route 66 is rebuilt, that road would offer too much competition to assure the toll road a success.

Due to the pessimistic report of the Allied Engineers Incorporated, the Superhighway Commission gave up the idea of building toll roads and the matter was dropped. In all probability it will not be taken up again for many years. In place of building toll roads, the Illinois Freeways Act was incorporated into law resulting in having 252 miles of route 66 denoted a freeway. Realising the need for a superhighway, whether toll or free, on this portion, the Division of Highways began to undertake the long slow process of rebuilding these routes. Since the old road had completely worn out, two new lanes were built parallel to it, and the former was abandoned and torn up as the new road was finished. In this manner, 133.5 miles of new highway has been built on route 66 since 1943. However, close to fifty miles of the road still remains in substandard condition, and, in addition, sixty miles are only in fair condition. The latter mileage is wearing out at an accelerated pace, and will have to at least be resurfaced within the next five years. At least 240 miles of two lane pavement must be constructed on route 66 before it all can be a superhighway. At the present rate of reconstructing twenty miles of two lane highway per year and considering that sixty miles will have to resurfaced soon, it will take at least fifteen years more to build this highway. By that time, the portion built in 1943 will be worn out.

If this construction schedule is continued, route 66 may be a superhighway throughout Illinois by 1965. This is, indeed, a pleasant prospect, but unfortunately there are signs that reconstruction of the route may slow down, and even stop within the next few years due to a lack of funds. While route 66 is the most important rural road in the state, other highways have to be kept open too. The Division of Highways has no fixed time schedule for route 66, only promising that it will be a superhighway at "some future

date as funds for its building become available."

## CONCLUSIONS

Route 66 is the most important rural road in Illinois. It serves more persons and carries more traffic than any other. It is the shortest and best highway link between the two great metropolitan districts of Chicago and St. Louis. It connects the state capitol with the largest city in Illinois, and the largest city in Missouri. As a transportation artery between Chicago and St. Louis, great quantities of foodstuffs, raw material, manufactured goods are shipped over it. In addition, it provides direct access between these two cities and the cities, towns, villages, and rural areas of the rich corn belt that forms their hinterland. That it is the eastern leg of a great trans-continental highway adds to its importance.

The Illinois portion of U. S. highway 66 should be made into a superhighway in order to improve it to a degree commensurate with this

importance. The congestion and traffic hazards found on the present road should be alleviated. There is sufficient traffic volume on the route to justify its construction as a superhighway by the standards of Indiana, one of the most progressive states in the highway field. Unfortunately, lack of funds prevents such a much needed change.

Route 66 has been one of the most important rural roads in Illinois since 1850, and was one of the first roads to be constructed with state aid funds, state bond issue funds, federal aid funds, special funds for construction of highways during wartime emergencies, and the first road in Illinois to be extensively rebuilt since the end of World War II.

Road taxes in Illinois are not sufficient to service the entire highway system properly, and this is the main reason Illinois highways are in such poor condition. Local roads are expensive to construct and maintain because of the nature of the soils. There is an abnormally large drain of funds from the treasury to keep these roads open, and primary highways suffer because of it.

Illinois built most of its present high type road system with a $160,000,000 bond issue for which we will continue to pay principal and interest until 1968, despite the fact that these roads have already worn out.

Motor vehicle registration fees in Illinois are abnormally low in comparison with those of other states and should be doubled to raise more money for new construction. This could be made to add approximately $30,000,000 annually to the highway fund. The gasoline tax should be increased two cents per gallon, thus adding another $40,000,000 annually. Sales taxes and vehicle taxes on automobiles and automobile accessories should be used for highway purposes, thus adding $30,000,000 to funds for local roads and allow a larger percentage of the gasoline tax to be spent on the primary system. These proposals should be enacted as soon as possible since experts believe the cost of reconstructing Illinois highways to minimum standards will be at least $500,000,000. The reconstruction cannot be done without more funds - the primary system as a whole is getting into worse condition with every succeeding year.

A superhighway from Chicago to East St. Louis could be successfully financed by tolls but there will be no more official proposals for toll roads in Illinois for many years due to a pessimistic survey taken in 1944.

Route 66 then, on the whole, is in only fair condition today, but will not be adequate for the needs of motorists until it is made into a superhighway. This cannot happen until more money is allocated to the Illinois primary system of highways.

## PREDICTIONS

There will be no increase in gasoline tax due in part to the failure of the Divison of Highways to make taxpayers believe the increase in really necessary. Such a proposed increase was recently voted down eight to one in Missouri. The next proposal to increase this tax in Illinois will undoubtedly also be voted down.

Motor vehicle registration fees will probably not be increased. Until the people of Illinois believe they pay for good roads whether they have them or not, there will be no additional revenue from this source.

Sales taxes or vehicle taxes probably will not be diverted for use on roads. Apparently this revenue is needed elsewhere.

Traffic volume will continue to grow on route 66 and that highway will become even more important than it is now, but all reconstruction of that road will have stopped by 1955 due to a lack of funds.

The following events will probably happen barring war or developments in atomic research which will revolutionize the present methods of transportation in America.

In 1959, the last of the 1924 bond issue will have been paid off. A new issue three times the amount of the old one will be proposed in 1960 and subsequently approved by the voters who will think they will thus be able to have new roads for a cost no higher than what they are presently paying.

Federal aid to Illinois will increase when there is a depression.

Route 66 will be a superhighway by 1965, thus connecting St. Louis with the eastern seaboard by a network of such roads.

# BIBLIOGRAPHY


1. Allied Engineers, Inc.
Toll Superhighways for Illinois
A Report to the Illinois State Superhighway Commission, Detroit, Michigan. 1944

2. Association of American Railroads
A Review of Railway Operations in 1948
Bureau of Railway Economics, Washington D. C. 1948

3. Automobile Manufacturers Association
Motor Truck Facts
29th Edition, Detroit, Michigan. 1949

4. Automobile Manufacturers Association
100 Million Motor Vehicles
Detroit, Michigan. 1948

5. Automobile Manufacturers Association
Automobile Facts and Figures
29th Edition, Detroit, Michigan. 1949

6. The Brookings Institute
Our Transportation Mess
Fortune, Vol. XL, No. 5, Nov. 1949: 139-142

7. Chicago Association of Commerce and Industry
Chicago in Brief
Chicago, Illinois. 1950

8. Contractors Hit Past Pace This Year
Roads and Streets, Vol. 92, No. 11, Nov. 1949: 52-62

9. Corliss, Carlton J.
Trails to Rails
Illinois Central System, Chicago, Illinois. 1937

10. Department of Public Works and Buildings, Division of Highways
Annual Reports of the Division of Highways
State of Illinois, Springfield, Illinois. 1941-1947

11. Enter the Road Builder
Fortune, Vol. XL, No. 5, Nov. 1949: 168-183

12. Evans, T. J.
Financing Pennsylvania's Superhighway
Pennsylvania Turnpike Commission, Harrisburg, Pennsylvania. 1947

13. Evans, T. J.
How Safe is the Pennsylvania Turnpike?
Pennsylvania Turnpike Commission, Harrisburg, Pennsylvania. 1948

14. Griffenhagen and Associates
A Highway Improvement Program for Illinois
State Department of Public Works and Buildings, Springfield, Illinois. 1947

15. Illinois Division of Vital Statistics and Records
Special Release No. 2
Springfield, Illinois. 1949

16. Nourham, L. K.
Comparison of Modern Road Surfacings
University of Illinois, Urbana, Illinois. 1935

17. O'Mahoney, Joseph C.
What Bad Roads Are Costing Us
American Mag. Vol. CXLIX, No. 5, Nov. 1948: 139-147

18. Ozelsel, Ahmet Munci
Some Aspects of Highway Research
University of Illinois, Urbana, Illinois. 1943

19. Petty, Ben H., Editor
Highway Extension News
Purdue University, Lafayette, Indiana, Vol. 11, March 1941 through Vol. 18, Jan. 1950.

20. Ramey, Mollie H.
History of the Early Roads in Illinois
University of Illinois, Urbana, Illinois. 1947

21. Rook, Franklin M.
Horses to Horsepower
Automobile Manufacturers Association, Detroit, Michigan. 1948

22. Toll Roads and Free Roads
Message From the President of the United States Referred to the Committee on Roads
Government Printing Office, Washington, D. C. 1939

23. Truell, Edna
Borrowing For Highways
Dun & Bradstreet, New York, New York. 1936

24. Tucker, H. and Leager, M. C.
Highway Economics
International Textbook Co., Scranton, Pennsylvania. 1942